



TRUSCON

1955
CATALOG

M
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WINDOWS
AND
DOORS

WAREHOUSE STOCK TYPES save time and money

The more popular types and sizes of Truscon's Steel Window and Door products are stocked in 23 widely located warehouses owned and operated by Truscon. Prompt delivery is thus assured of practically any normal requirement for the smaller building projects on which construction gets quickly under way and must continue without costly interruption and delay.

ADVANTAGES OF STOCK SIZES

Unnecessary costs and time-wasting delays can be avoided by using stock size materials whenever possible. Truscon Window sizes, in general, conform to the recommended standards of the Steel Window Institute.

Your overall building costs can be lowered and your buildings made more saleable through the use of quality Truscon steel building materials — available from warehouse stocks.

LARGE DEALER STOCKS

As an added help to speed these steel products on their way, Truscon has supplied many local dealers with stocks of most types of materials.

Truscon's conveniently located supply points . . . both warehouse and dealer . . . will be of special help to you in your construction work. Walls can go up and around windows without delay — because Truscon will have the windows on the job.

STOCK SIZES OF THESE PRODUCTS CARRIED IN TRUSCON WAREHOUSES

Note: All products are of steel unless otherwise noted.

DOUBLE-HUNG WINDOWS

CASEMENTS (Steel and Aluminum)

AWNING WINDOWS (Aluminum only)

RANCH WINDOWS

ARCHITECTURAL PROJECTED WINDOWS

INTERMEDIATE PROJECTED WINDOWS

COMMERCIAL PROJECTED WINDOWS

SECURITY WINDOWS

UTILITY AND BASEMENT WINDOWS

SCREENS AND STORM SASH

CASINGS, SURROUNDS AND TRIM

LINTELS

RESIDENTIAL DOORS

INDUSTRIAL DOORS

WELDED WIRE FABRIC

PRESSED STEEL INSERTS

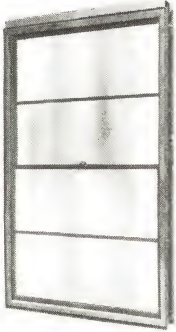
CONCRETE REINFORCING BARS

METAL LATH PRODUCTS, CORNER BEADS, CASINGS, METAL ARCHES AND OTHER PLASTERING ACCESSORIES



23 Warehouses to give prompt and efficient service

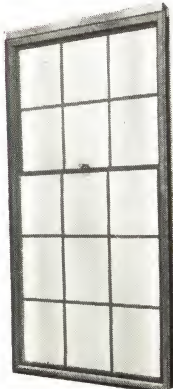
TRUSCON DOUBLE-HUNG STEEL WINDOWS—SERIES 138



"B" Muntin Design



"E" Muntin Design



Colonial Design
(In 5'-5 1/4" Height Only)



Picture Window
with Sill Ventilator



Link Residence, E. Belvedere Ave., Baltimore, Md.; Uplands, Inc., Bldr.; Hal A. Miller, Archt.

This outstanding window is an original development by Truscon in answer to the insistent demand for an economically priced steel window in the popular double-hung design. To attain a production volume permitting sale and installation at a price-level comparable to that of the conventional wood window, it was necessary to design and construct special manufacturing equipment capable of high quality fabrication in mass output, with a resulting minimum of manufacturing cost.

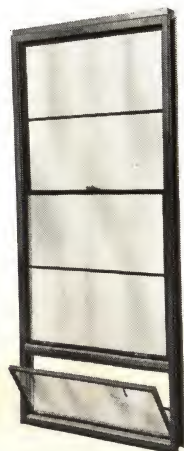
The remarkable success attending the marketing of the Series 138 residential design in the years following its introduction in 1938, later led to an expansion of its size range beyond the original limits. It is now available in types and sizes suitable for use in schools, hospitals, office buildings, etc. Also, picture window types and designs with sill ventilators have been added. By the combination of standard types and sizes practically any desired multiple window opening design may be obtained.

In the period following World War II, the steadily expanding demand for this simple, weathertight and convenient product has required an increase of manufacturing facilities in each succeeding year. Now, with practically a 100% mechanized tooling set-up for fabrication, greater production has permitted the cost absorption of a major part of the generally increased labor and material costs. While selling prices have been held to a minimum, added features, including stainless steel weatherstripping, solid bronze hardware, and heavier gauge steel for certain component parts, have been included without commensurate change in price.

SCREENS AND STORM SASH

(Illustrated on page 13)

Either full or half screens are available in sizes and with provision for installation without additional field work. Storm sash are similarly available. Manufacture of these collateral items in standard sizes only and in unusually large quantities make them available at minimum cost. Installation on the exterior side of the window from a position on the interior affords maximum convenience. Storm sash are glazed with double strength clear glass.



"B" Muntin Design
with Sill Ventilator



Multiple Opening Obtained by Assembling
Standard Units and Mullions

TRUSCON DOUBLE-HUNG STEEL WINDOWS—SERIES 138

CONSTRUCTION FEATURES

DURABILITY

Sash and frame members are electro-galvanized, bonderized, and primed with one coat of Bakelite (phenol-resin base) paint, oven-baked. 18 gauge throughout except sill of frame which is 16 gauge.

HEAD

Motor-spring type spring balances with stainless steel tapes. Two balances for each sliding sash. Wind-break flange set back to allow room for lintel. Stainless steel weatherstripping attached to frame. 18 gauge frame and sash members.

MEETING RAIL

Interlocking tubular sash rails with stainless steel weatherstripping. Bronze sweep lock and strike. Rust-proofed pull-down handle. 18 gauge sash members.

JAMB

Full length stainless steel weatherstripping attached to frame assures weathertightness and also serves as sash way for both upper and lower sash for easier operation. Plaster stop provided on interior and rebate for screens and storm sash on exterior. Deep bead. 18 gauge frame and sash members.

SILL

Double step design forms two point weathering contact with sash. Heavy 16 gauge steel for strength and rigidity. Stainless steel weatherstripping attached to sash. Bronze sash lifts.



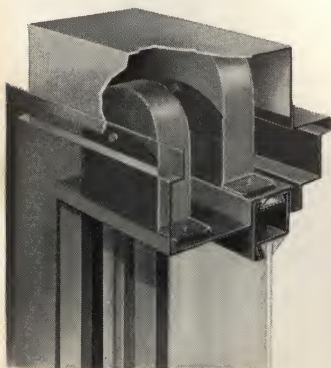
Pole Socket
P-7701

Furnished on special order for windows shipped from factory.



Pole Hook and Pole
P-7318

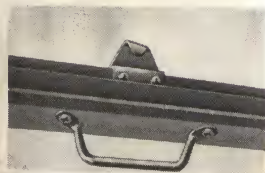
Furnished at extra cost. Lengths 6'-8'-10'. Bronze hook, steel tube shaft, rubber tip.



Spring Balances



Sweep Lock
P-7330-CB

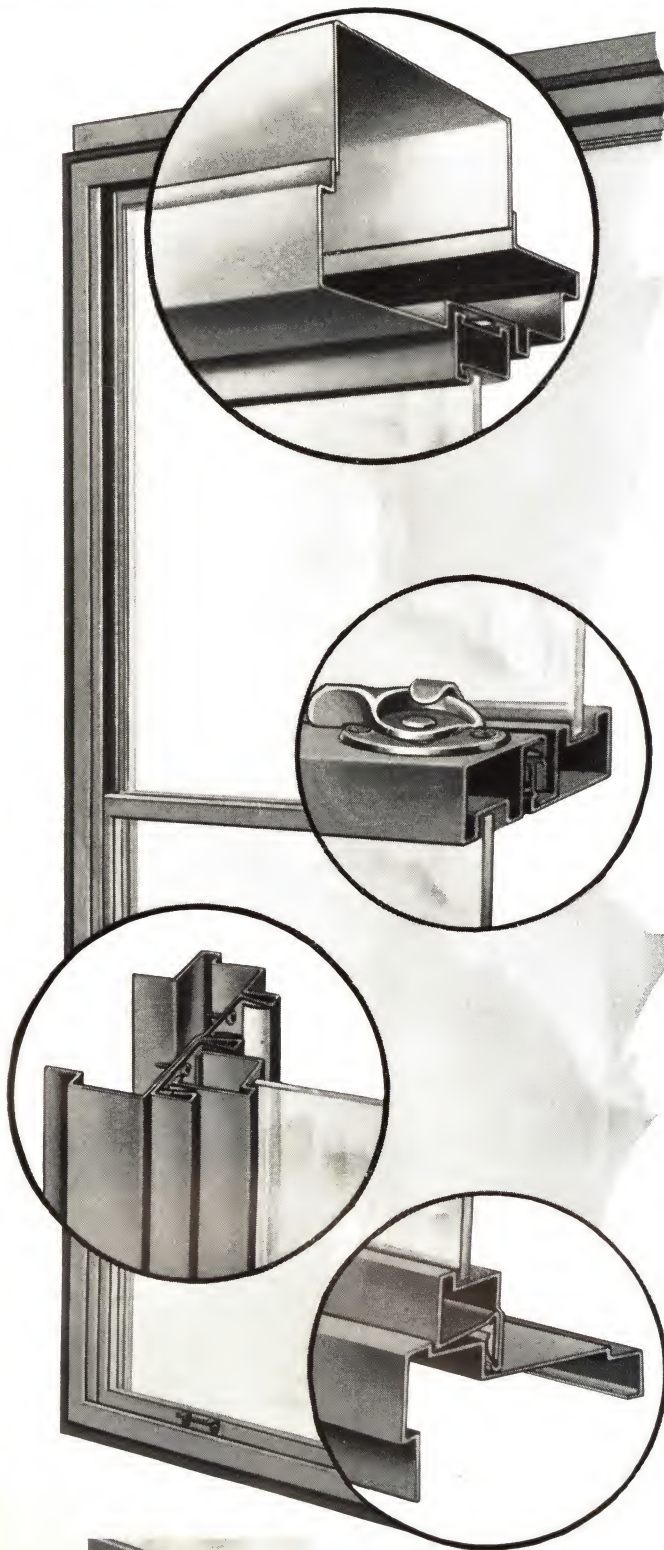


Lock Keeper
P-7367-R

Pull-Down Handle
P-7281-R

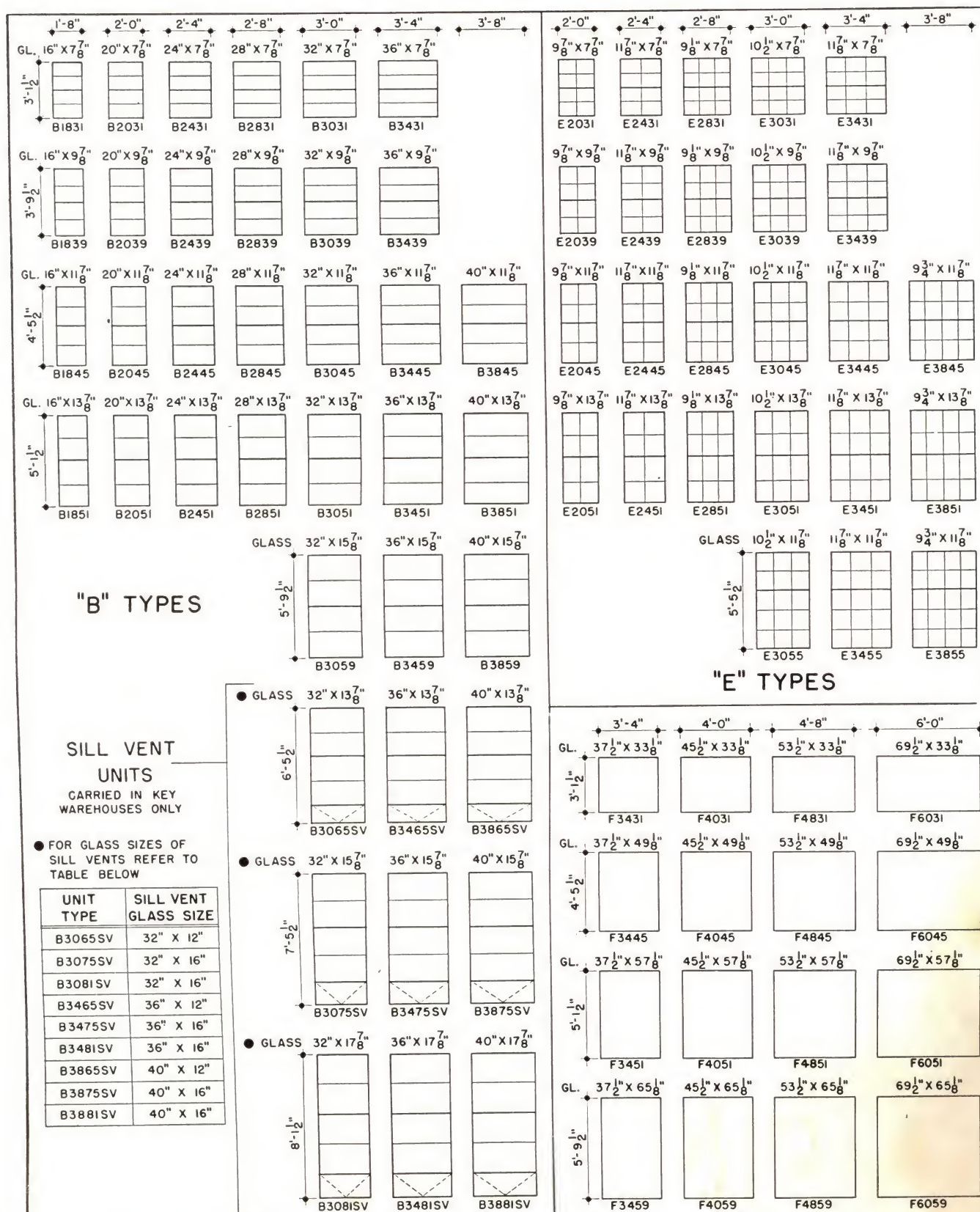


Lift Handle
P-7425-CB



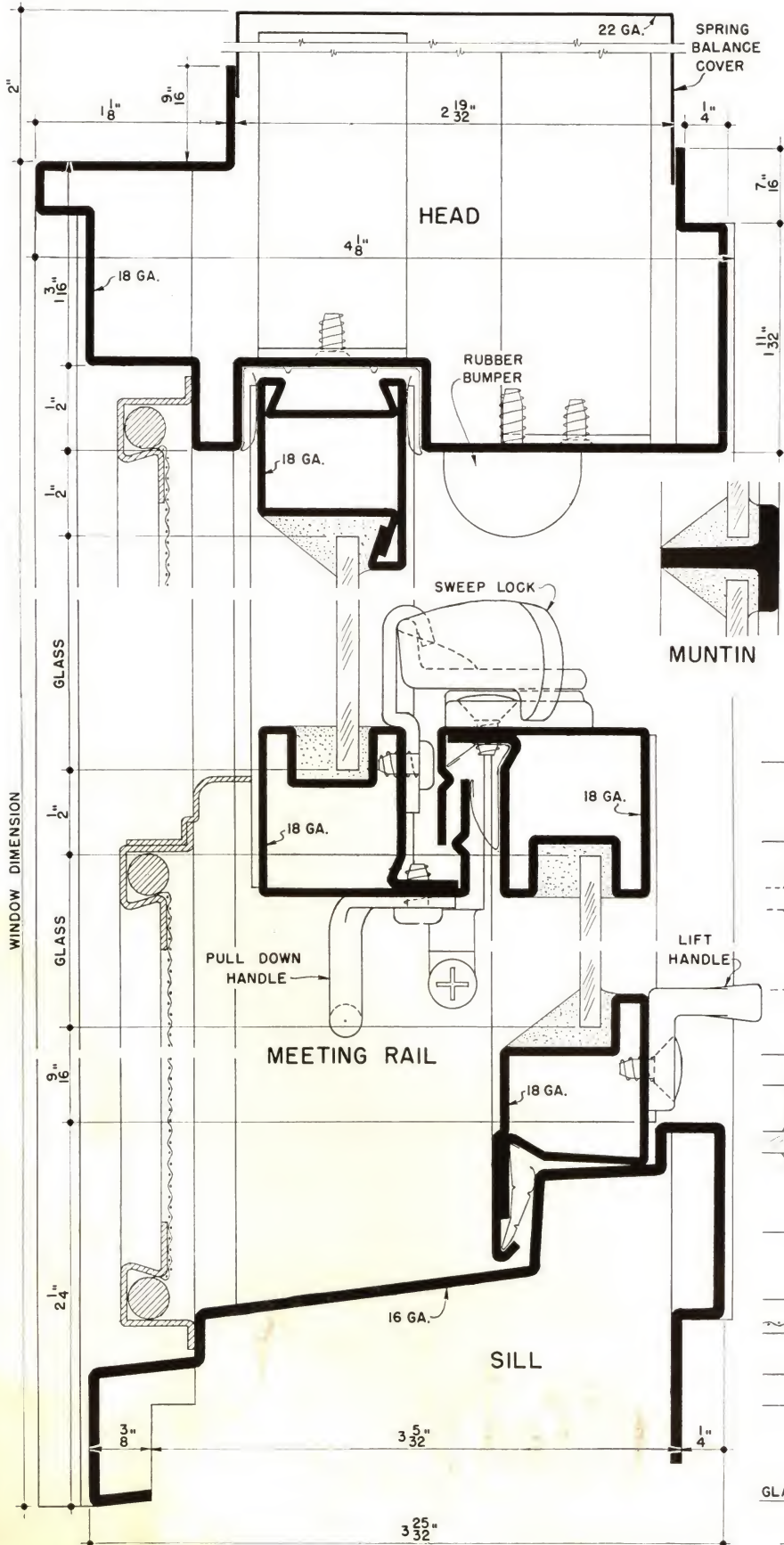
TRUSCON DOUBLE-HUNG STEEL WINDOWS—SERIES 138

TYPES AND SIZES CARRIED IN WAREHOUSE STOCKS

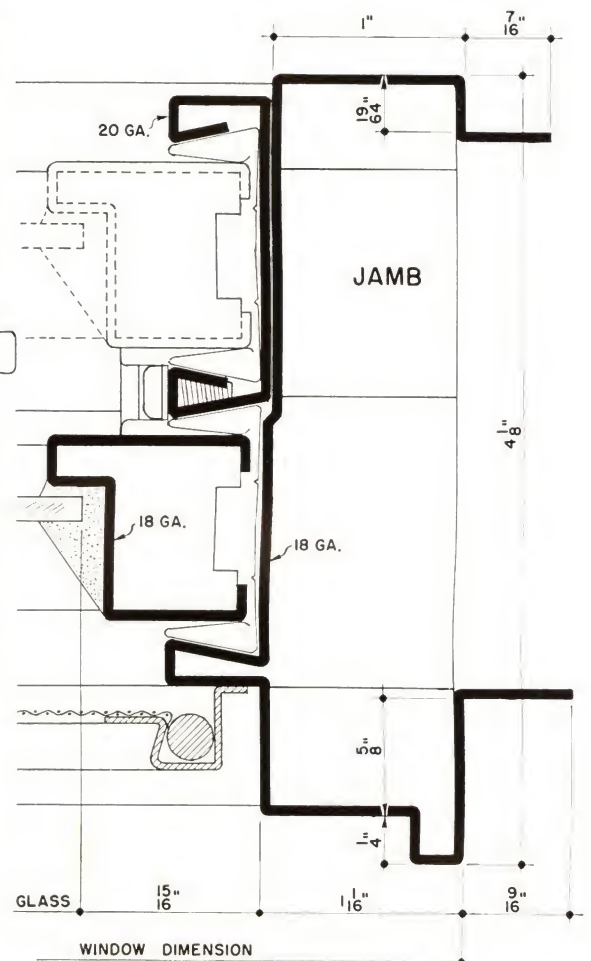


TRUSCON DOUBLE-HUNG STEEL WINDOWS—SERIES 138

FULL SIZE SECTIONS



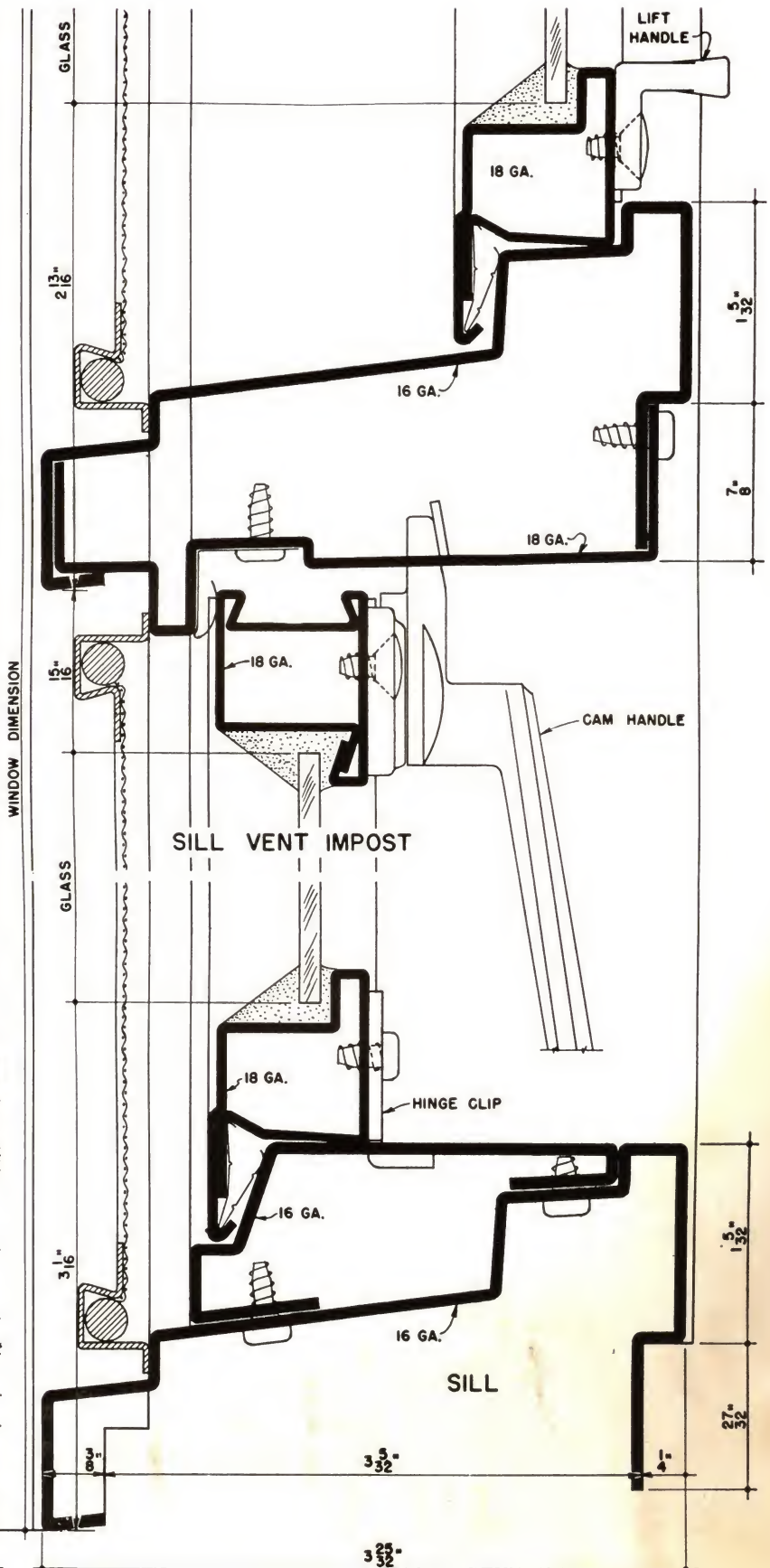
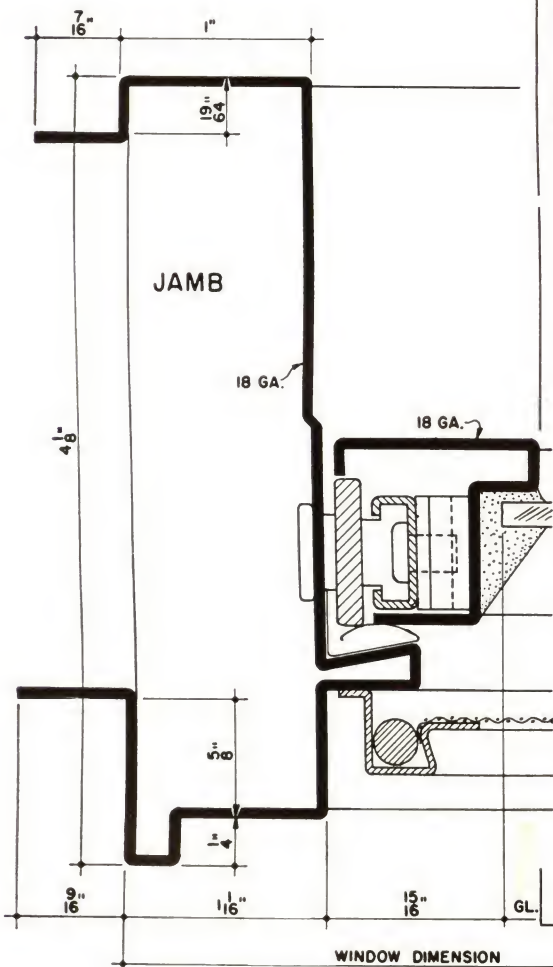
Barney Convalescent Hospital, Dayton, Ohio
Maxon Construction Co., Contr.
Lorenz & Williams, Archt.



**TRUSCON DOUBLE-HUNG
STEEL WINDOWS—SERIES 138
FULL SIZE SECTIONS**



Medical College & School of Dentistry
Birmingham, Ala.; Daniel Construction Company
of Ala., Contrs.; Warren-Knight & Davis, Archts.



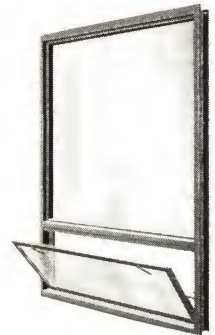
TRUSCON DOUBLE-HUNG STEEL WINDOWS—SERIES 138

PICTURE WINDOW UNITS



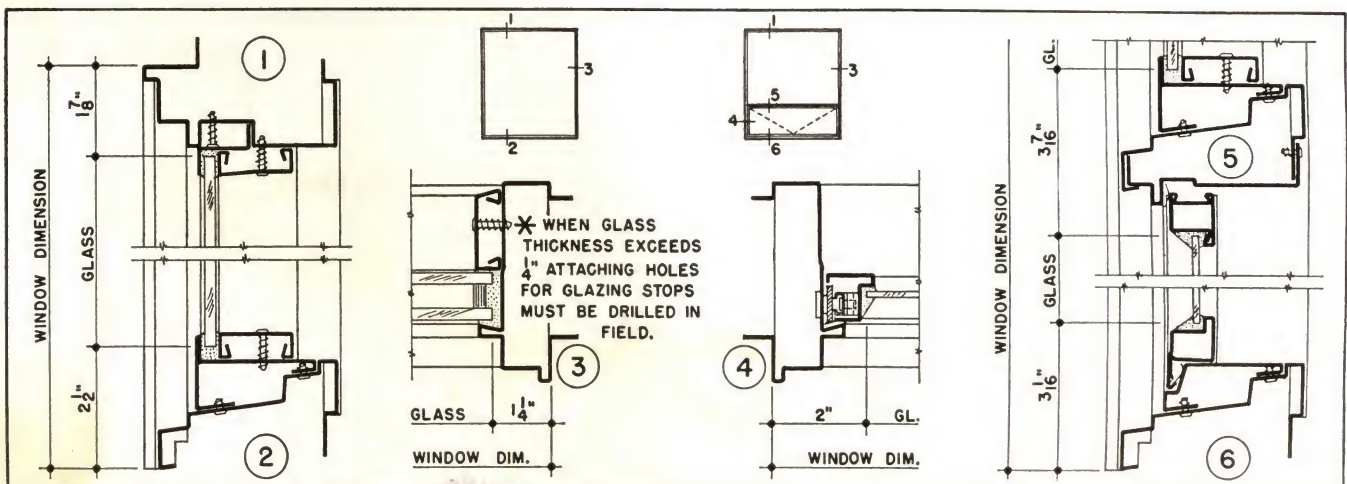
Picture Window
"F" Types

Series 138 Picture Windows, either with or without sill vents, are available for use in combination with standard double-hung units, or singly. Fabricated from the same basic sections and to the same specifications as the double-hung windows, these picture units round out all normal requirements that may be encountered in Series 138 window installations. Note that maximum widths are 6'-0" for the full picture units and 4'-0" for the sill vent types.



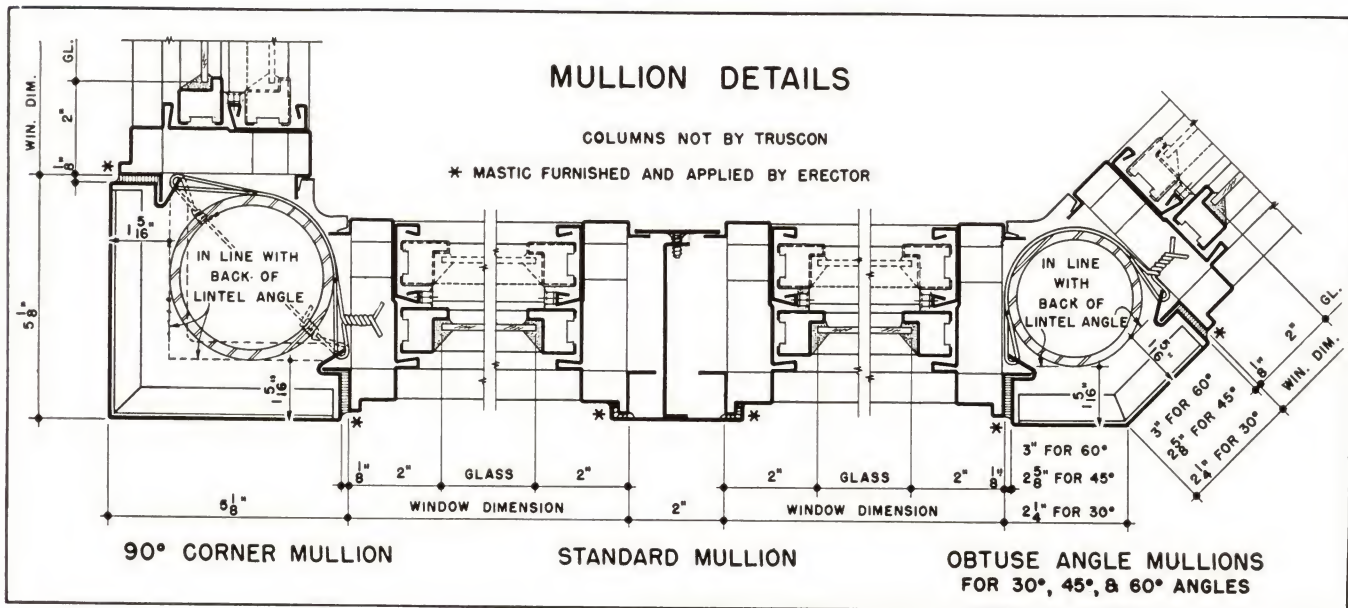
Picture Window
with Sill Vent
"F-SV" Types

WAREHOUSE SIZES "F" TYPES ONLY			STANDARD SIZES			
Type	Window Dimension	Glass Size	Window Dimension	WIDTHS		
				"F" Types	Glass Dimension	
					Sill Vent, "F-SV" Types	
					Fixed Light	Sill Vents
F-3431	3'-4" x 3'-1 1/2"	37 1/2" x 33 1/8"	1'-8"	17 1/2"	17 1/2"	16"
F-3445	3'-4" x 4'-5 1/2"	37 1/2" x 49 1/8"	2'-0"	21 1/2"	21 1/2"	20"
F-3451	3'-4" x 5'-1 1/2"	37 1/2" x 57 1/8"	2'-4"	25 1/2"	25 1/2"	24"
F-3459	3'-4" x 5'-9 1/2"	37 1/2" x 65 1/8"	2'-8"	29 1/2"	29 1/2"	28"
F-4031	4'-0" x 3'-1 1/2"	45 1/2" x 33 1/8"	3'-0"	33 1/2"	33 1/2"	32"
F-4045	4'-0" x 4'-5 1/2"	45 1/2" x 49 1/8"	3'-4"	37 1/2"	37 1/2"	36"
F-4051	4'-0" x 5'-1 1/2"	45 1/2" x 57 1/8"	3'-8"	41 1/2"	41 1/2"	40"
F-4059	4'-0" x 5'-9 1/2"	45 1/2" x 65 1/8"	4'-0"	45 1/2"	45 1/2"	44"
F-4831	4'-8" x 3'-1 1/2"	53 1/2" x 33 1/8"	4'-4"	49 1/2"	.....	.....
F-4845	4'-8" x 4'-5 1/2"	53 1/2" x 49 1/8"	4'-8"	53 1/2"	.....	.....
F-4851	4'-8" x 5'-1 1/2"	53 1/2" x 57 1/8"	5'-0"	57 1/2"	.....	.....
F-4859	4'-8" x 5'-9 1/2"	53 1/2" x 65 1/8"	5'-4"	61 1/2"	.....	.....
F-6031	6'-0" x 3'-1 1/2"	69 1/2" x 33 1/8"	5'-8"	65 1/2"	.....	.....
F-6045	6'-0" x 4'-5 1/2"	69 1/2" x 49 1/8"	6'-0"	69 1/2"	.....	.....
F-6051	6'-0" x 5'-1 1/2"	69 1/2" x 57 1/8"				
F-6059	6'-0" x 5'-9 1/2"	69 1/2" x 65 1/8"				
NOTE: Fixed lights may be glazed with single glass up to 1/4" thick or with double glass of 1" maximum thickness. In the sill vents, glass cannot exceed 1/4" thickness.			HEIGHTS			
			3'-1 1/2"	33 1/8"	.....	.....
			3'-9 1/2"	41 1/8"	.....	.....
			4'-5 1/2"	49 1/8"	33 1/8"	12"
			5'-1 1/2"	57 1/8"	41 1/8"	12"
			5'-9 1/2"	65 1/8"	49 1/8"	12"
			6'-5 1/2"	73 1/8"	57 1/8"	12"
			7'-5 1/2"	85 1/8"	65 1/8"	16"
			8'-1 1/2"	93 1/8"	73 1/8"	16"



TRUSCON DOUBLE-HUNG STEEL WINDOWS—SERIES 138

MULLIONS—WINDOW CLEANER ANCHORS



WINDOW CLEANER ANCHORS

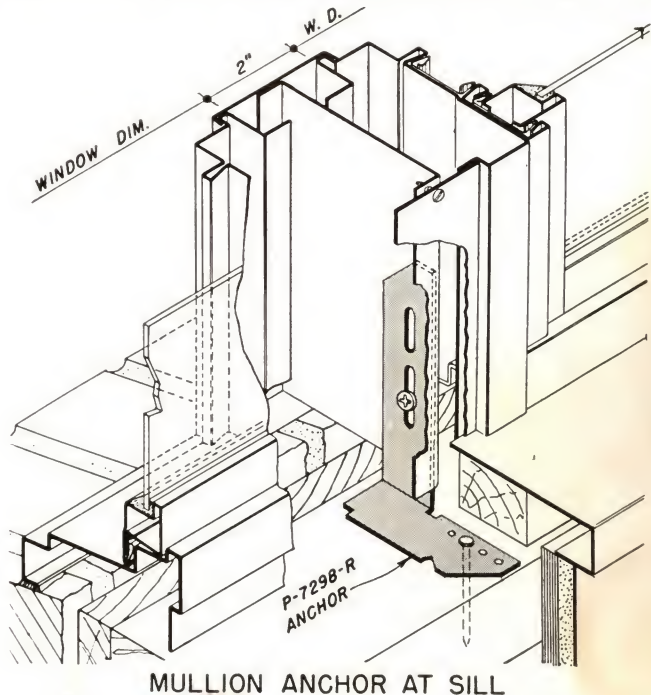
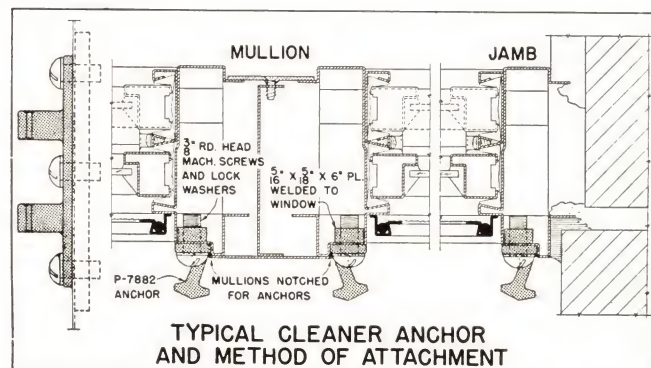
In many localities, Window Cleaner Anchors are mandatory for use on windows installed in multi-storied structures. However, state and city building regulations vary widely in regard to the types of anchors permitted and, to a lesser extent, their method of attachment to windows. The detail here shown is acceptable in most areas and is the Truscon standard for use in the Series 138 windows. Other types of anchors are available. The local requirements should be verified with the proper authorities prior to ordering of windows equipped with cleaner bolts.

One pair of cleaner anchors is used on each unit window. They are shipped loose for attachment in the field and are usually located with anchor centerline 44 inches above the sill. The windows must be prepared to receive anchors in the shop. Anchors are attached prior to window installation.

Important — Half screens may be used with any anchor design. Full top hung screens and the combination storm sash and screen arrangement can be used with Truscon's standard anchor but only with a limited few cleaner anchors of other types. This is due to the lack of clearance for attachment and removal of the screens or storm sash combination. The anchor here shown is designed to permit the necessary clearance but possibly may not meet special anchor requirements of some local or state building authorities.

MULLION ANCHORS

In multiple unit openings, the bottom end of mullion should be secured at sill, when required. Properly secured, the mullion will effectively retain the window units it connects. The same method of anchorage may be used at the head when required. The P-7298-R anchors are attached with nails driven into wood or masonry. See detail at right.

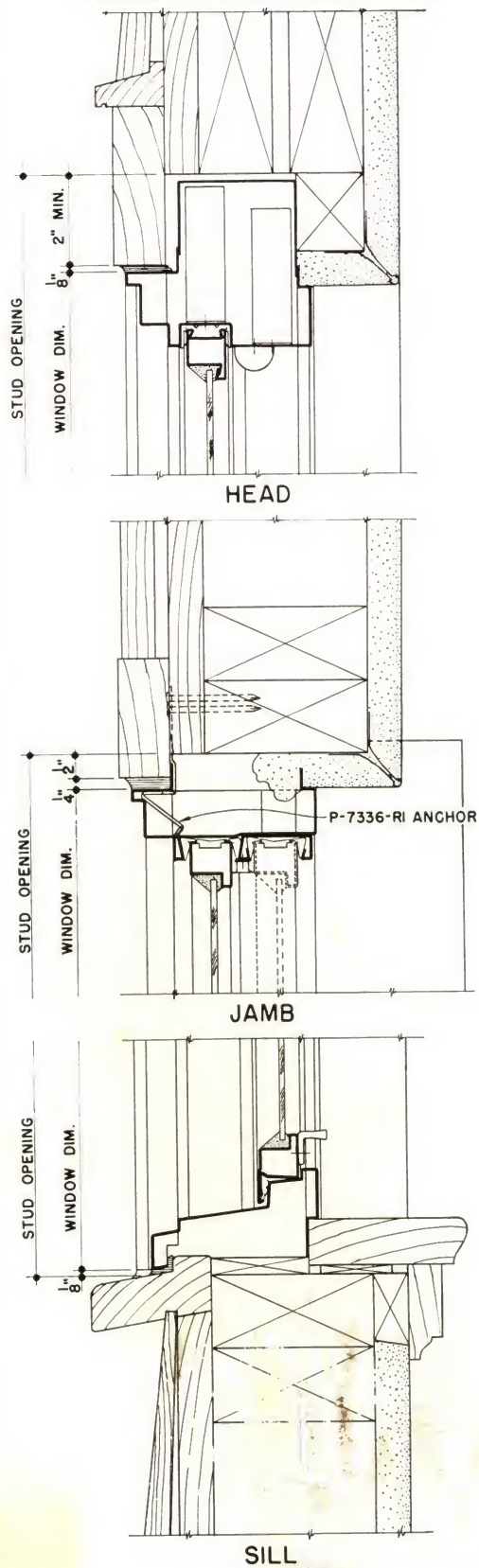


TRUSCON METAL WINDOWS AND DOORS

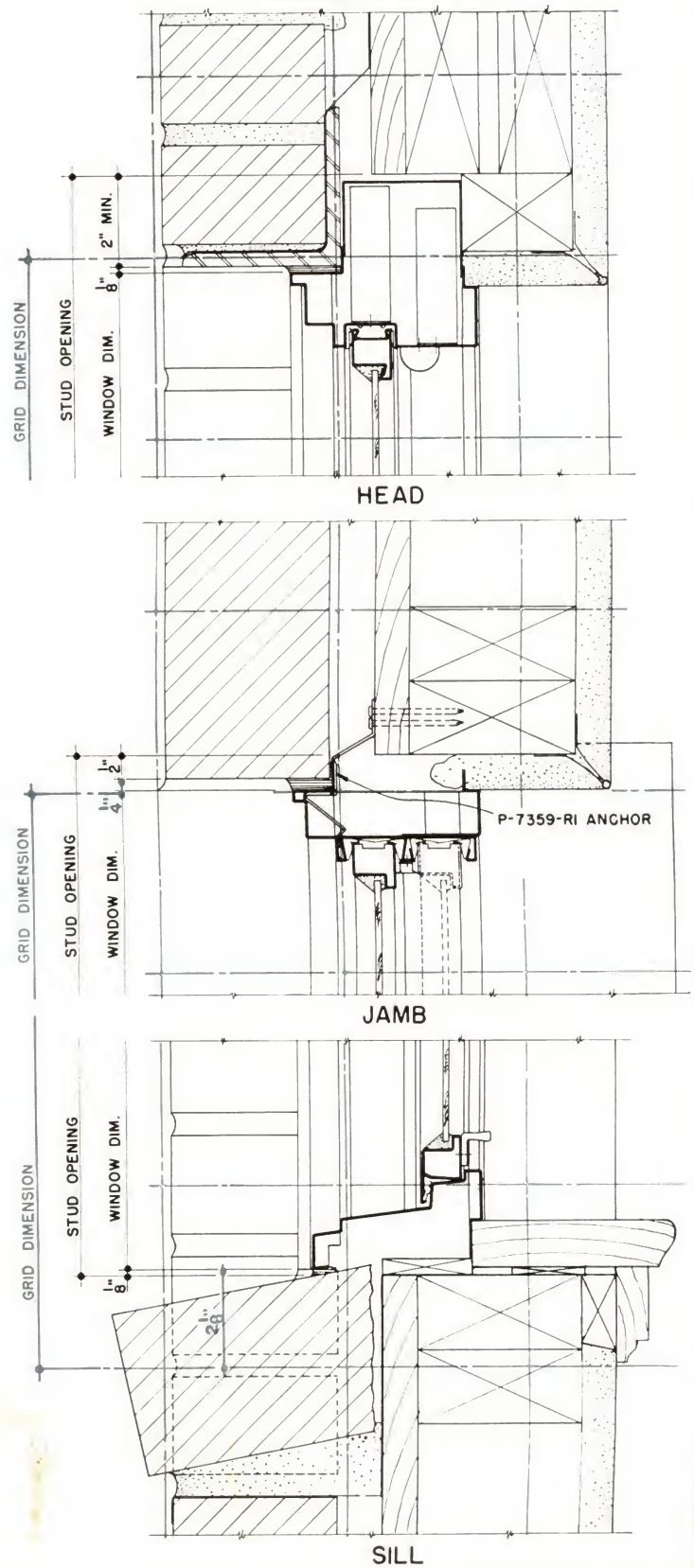
TRUSCON DOUBLE-HUNG STEEL WINDOWS—SERIES 138

INSTALLATION DETAILS

FRAME CONSTRUCTION

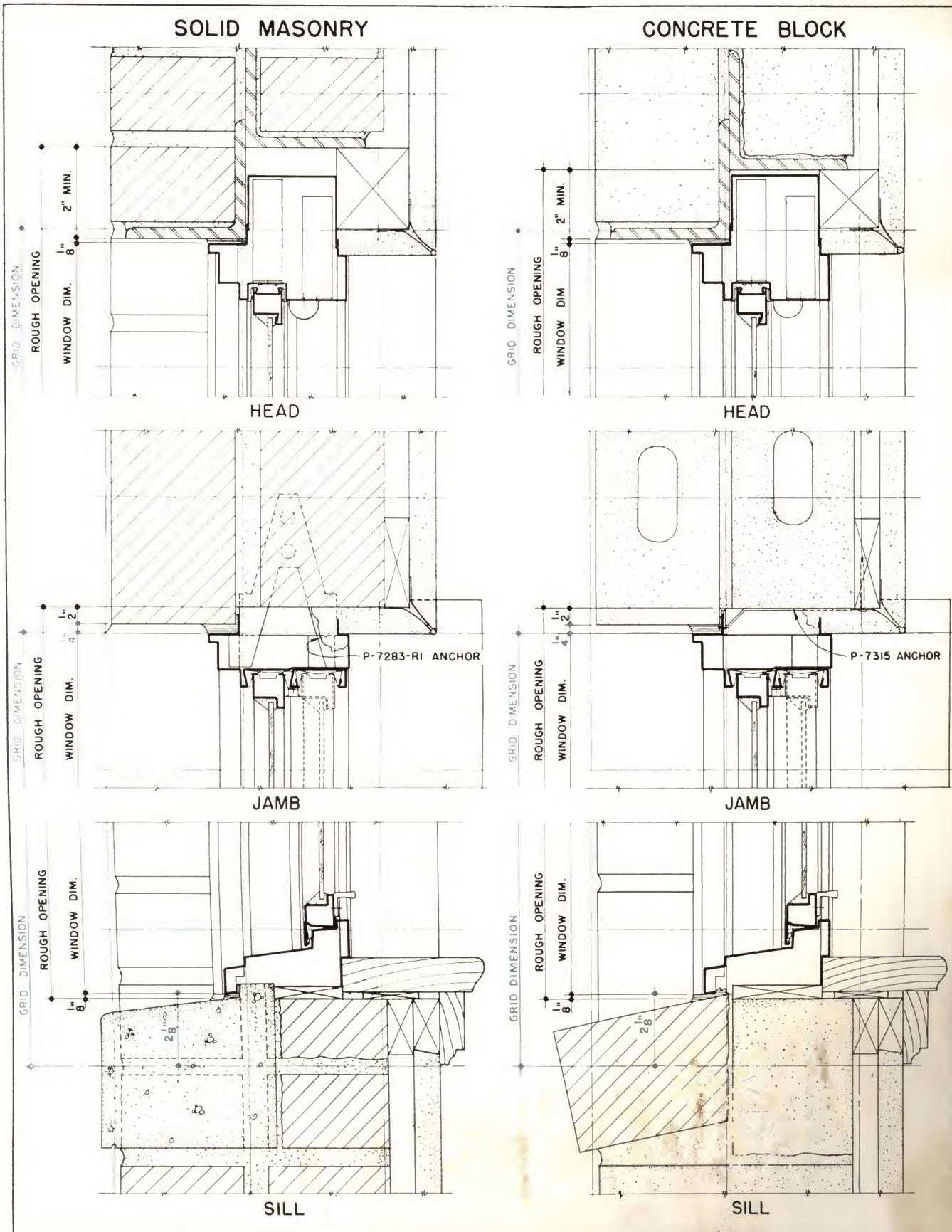


BRICK VENEER



TRUSCON DOUBLE-HUNG STEEL WINDOWS—SERIES 138

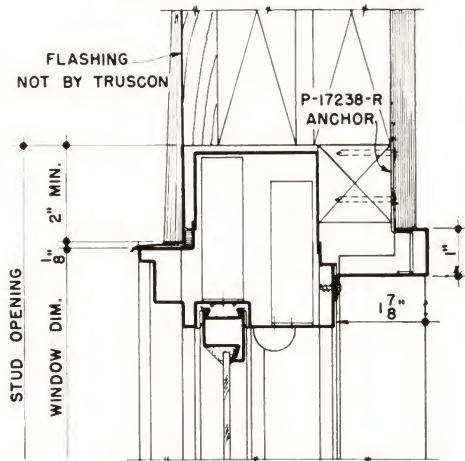
INSTALLATION DETAILS



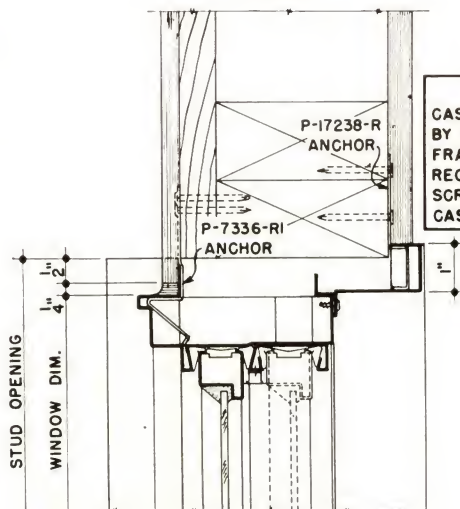
TRUSCON DOUBLE-HUNG STEEL WINDOWS—SERIES 138

INSTALLATION DETAILS

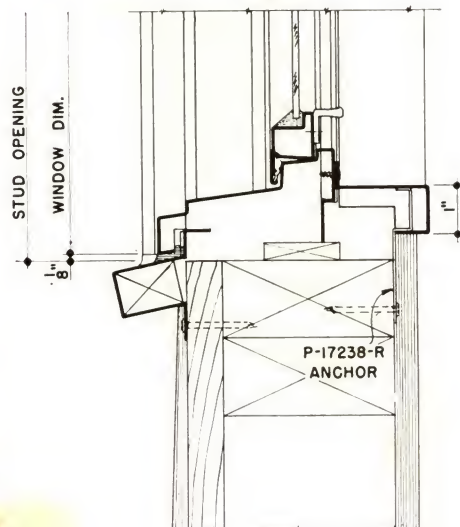
FRAME CONSTRUCTION WITH STEEL TRIM



HEAD



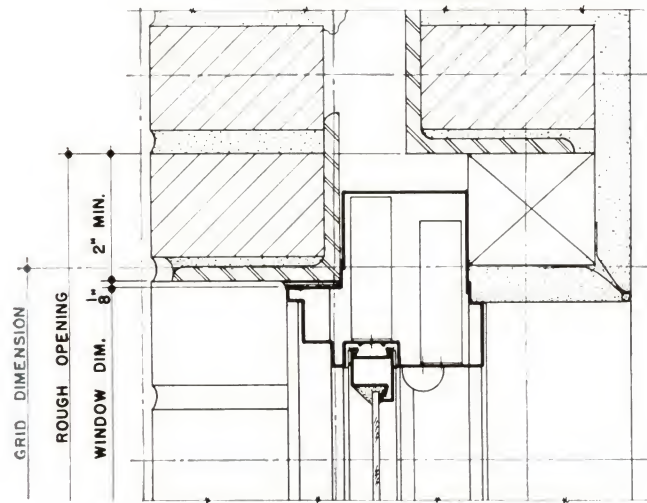
JAMB



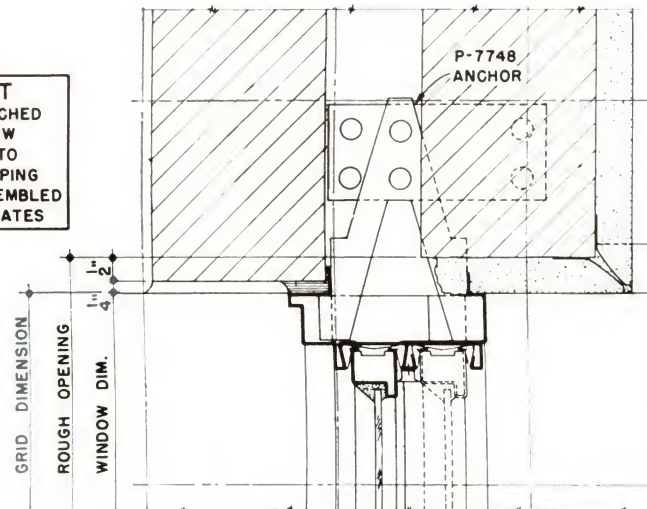
SILL

IMPORTANT
CASINGS ARE ATTACHED BY DRILLING WINDOW FRAMES IN FIELD TO RECEIVE SELF-TAPPING SCREWS USING ASSEMBLED CASINGS AS TEMPLATES

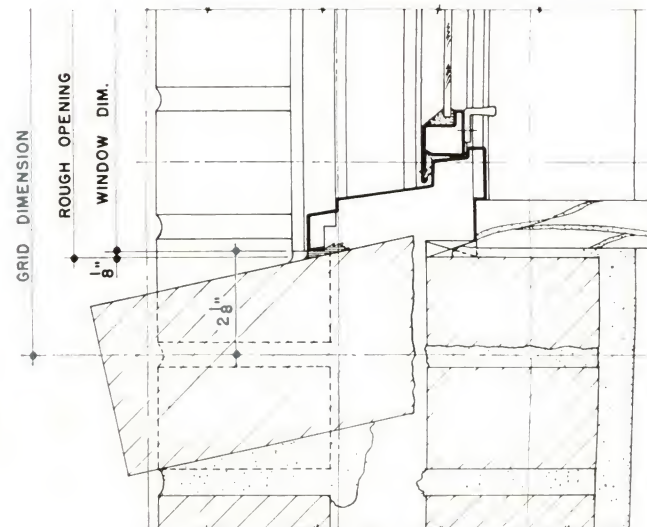
CAVITY WALL



HEAD



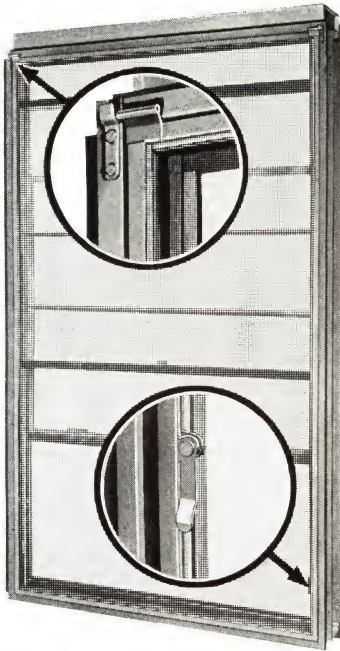
JAMB



SILL

TRUSCON DOUBLE-HUNG STEEL WINDOWS—SERIES 138

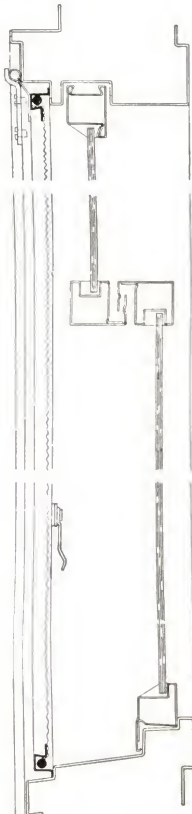
SCREENS AND STORM SASH



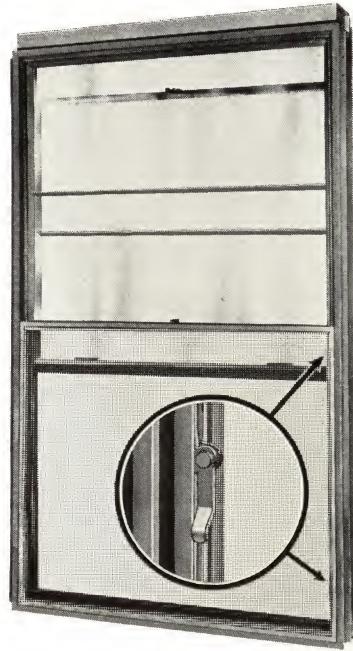
TOP HUNG FULL SCREEN

The top hung full screen covers the full window opening and provides protection against insects even when both sash are opened. It is located on the outside and does not interfere with the opening or closing of the sash. Screens for windows over 4'-5 1/2" high have horizontal center braces.

Screen frames are of steel, rewirable, and finished with one coat of baked enamel.

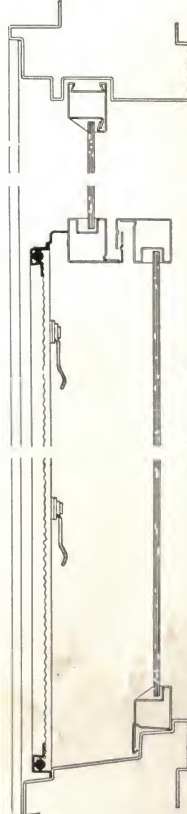


See
Note
Below



FIXED HALF SCREEN

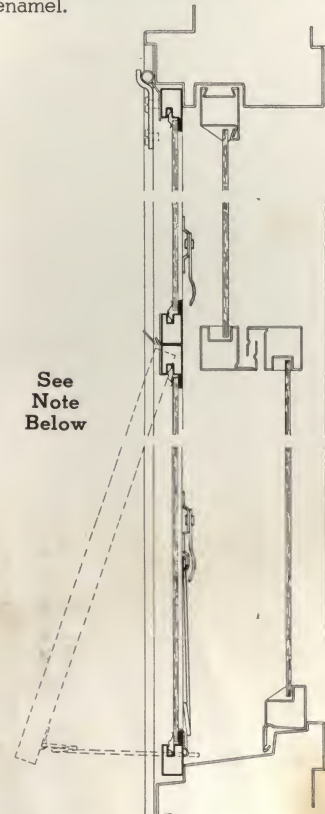
The fixed half screen is more economical than the top hung full screen, but covers the lower sash only. It is located on the outside and does not interfere with the opening or closing of the sash. Easily installed or removed from within the room, this screen is fastened by cam acting latches. The fixed half screen is interchangeable with the bottom panel of the combination storm window.



COMBINATION STORM SASH AND SCREEN

The combination storm window is designed to provide effective insulation during winter and controlled ventilation during summer. It consists of two storm sash panels and one screen panel, the bottom storm panel and the screen being interchangeable. (The screen is the fixed half type illustrated at left.)

Storm panels have steel frames, are glazed with clear double strength glass and are finished in one coat baked enamel.



See
Note
Below

Note: WHEN WINDOWS MUST BE EQUIPPED WITH CLEANER ANCHORS, SEE SCREEN RESTRICTIONS ON PAGE 9.

TRUSCON DOUBLE-HUNG STEEL WINDOWS—SERIES 138

STEEL CASINGS, STOOLS AND SUBSILLS

STEEL CASINGS

(Details shown on opposite page)

Steel Casings have clearly proven their superiority over the conventional plastered wall construction, both as to first cost and maintenance. This is particularly true on large housing projects where materials and methods promising reduced overall costs are eagerly sought. The $2\frac{1}{8}$ " and $2\frac{5}{8}$ " standard depth casings, as shown in the details on the opposite page, are available from key warehouse stocks, in sizes required to fit all stock sizes of Series 138 windows. When required in other casing depths, or for windows other than stocked in warehouses, casings may be ordered from factory. However, the size of such an order must include a total of 300 windows and an

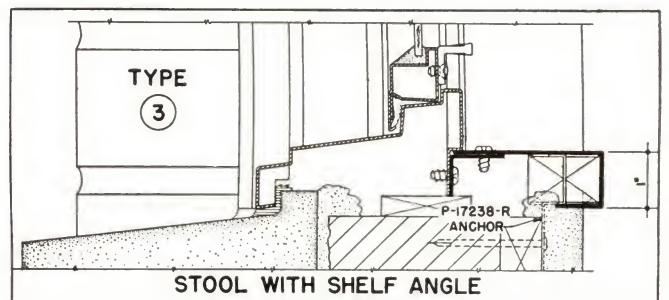
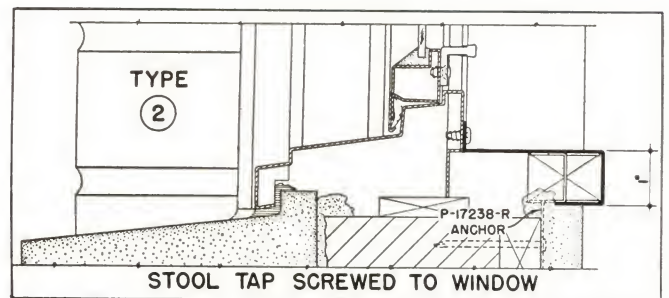
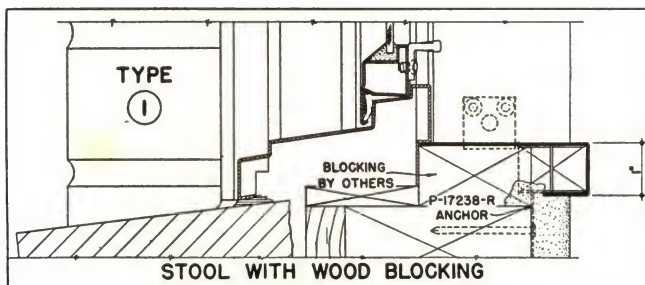
average of not less than 50 casings in each different window size ordered.

Truscon casings are manufactured from 18 gauge steel sheet, are accurately formed to size, bonderized and painted after fabrication, and shipped "knocked down." They are designed with a concealed mortise and tenon system of assembly at the corners, and are attached to the windows in the field by means of self-tapping screws, using the casing as a template to drill the screw holes in the windows. Anchors are supplied to hold the inner edges of casings firmly in position. A buttered-on mastic seal is recommended for best results.

STEEL STOOLS

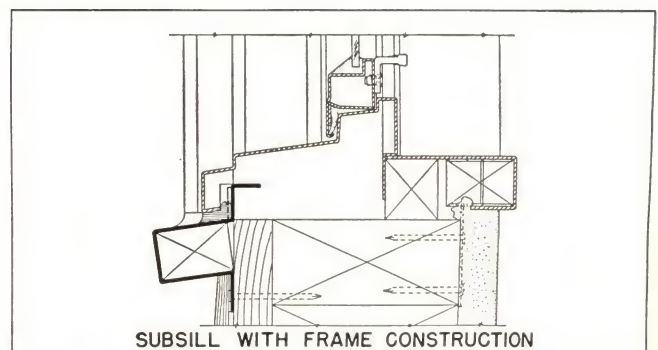
Steel Stools of 18 gauge material, and in either design shown herewith, are available for use with Series 138 Double-Hung Steel Windows. Stools are available in any normal depth, for shipment from the factory, provided there is required a minimum of 300 stools in not more than three depths.

Stools have closed ends, and anchors are provided to support the inside edge. They are attached to the window in the field with self-tapping screws, using the stool as a template to drill the screw holes in the window. Underblocking is recommended with Type 1.



EXTERIOR STEEL SUBSILLS

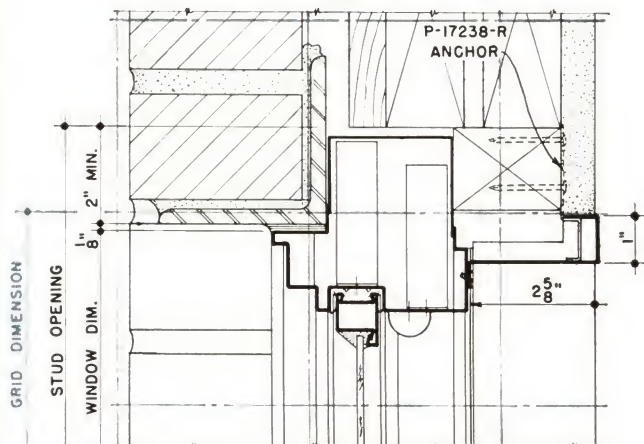
Steel Subsills find their widest application in conjunction with installations of Series 138 Double-Hung Windows in wood frame construction, replacing the usual wooden sill. Subsills are carried in key warehouses in lengths to fit all stock 138 window widths and a number of twin and triple combinations thereof. They are manufactured of 18 gauge galvanized steel, bonderized and painted two coats of baked-on primer before shipment. Attachment is made with nails or wood screws.



TRUSCON DOUBLE-HUNG STEEL WINDOWS—SERIES 138

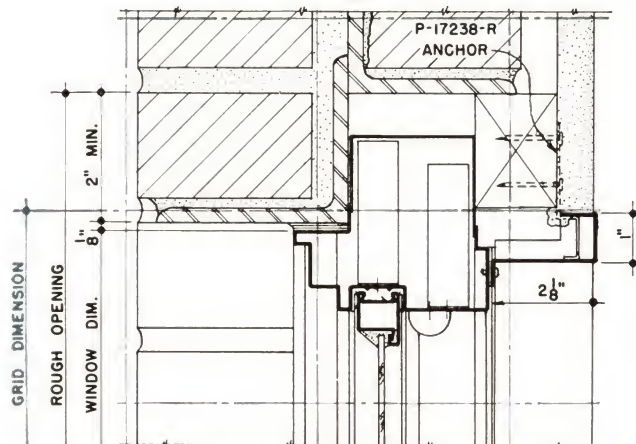
STEEL CASINGS

BRICK VENEER
WITH 2 $\frac{5}{8}$ " CASING

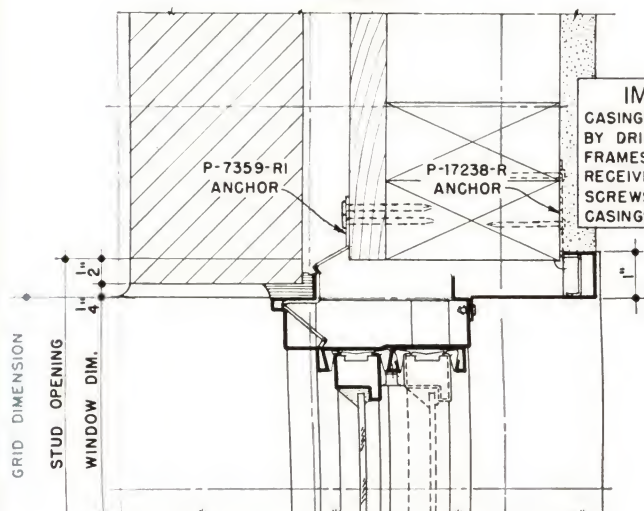


HEAD

SOLID MASONRY
WITH 2 $\frac{1}{8}$ " CASING

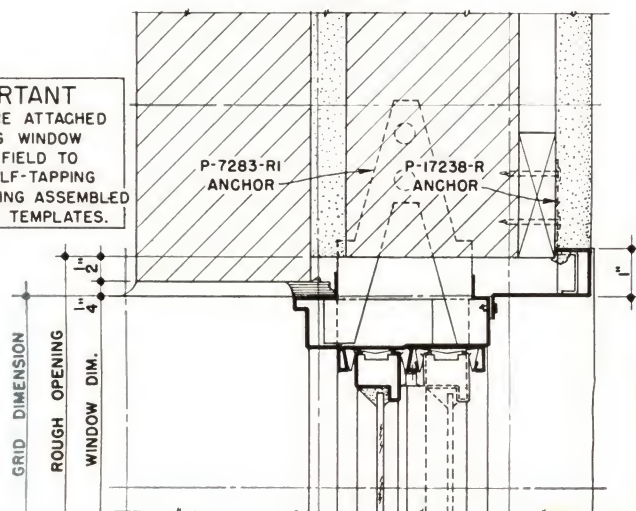


HEAD

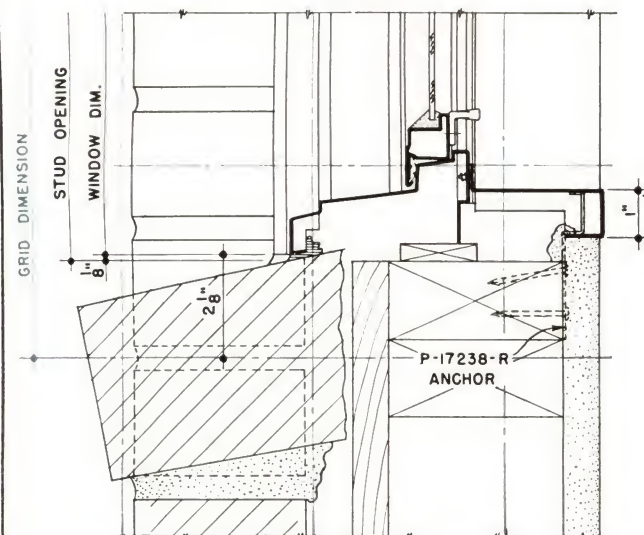


JAMB

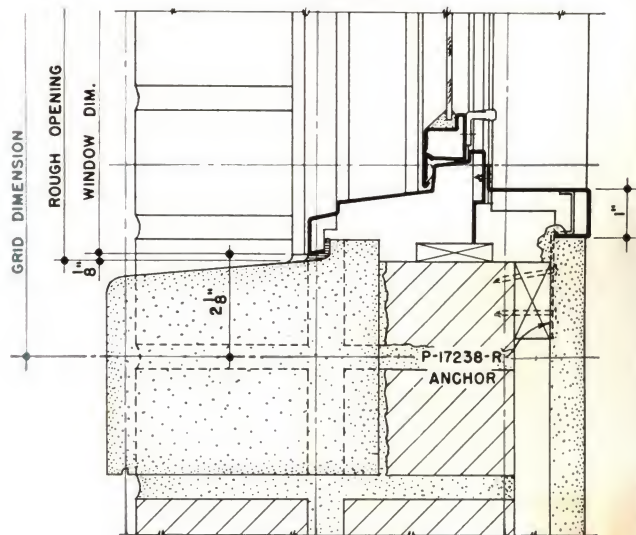
IMPORTANT
CASINGS ARE ATTACHED
BY DRILLING WINDOW
FRAMES IN FIELD TO
RECEIVE SELF-TAPPING
SCREWS USING ASSEMBLED
CASINGS AS TEMPLATES.



JAMB



SILL



SILL

TRUSCON DOUBLE-HUNG STEEL WINDOWS—SERIES 138

SPECIFICATIONS

1. **Specify**—Double-Hung Steel Windows, Series 138 as manufactured by Truscon Steel Division, Republic Steel Corporation, Youngstown, Ohio.

2. **Materials**—New billet electro-galvanized strip steel of 18 gauge throughout except sill member which shall be of 16 gauge, the parting strips of 20 gauge and the head cover of 22 gauge.

3. **Construction**—Frame members shall be one piece, cold rolled, and shall run continuous from head to sill and from jamb to jamb. Frame members shall provide a rebate for exterior screens and storm sash. Windbreak flange at head shall be set back $\frac{1}{4}$ " deeper than at jambs to provide space for lintel angle without chipping brick. Sash members shall be of one piece cold rolled tubular shape, not less than $\frac{7}{8}$ " deep. Corners of frame and of sash shall be telescoped and welded. Frames shall be prepared for standard storm sash and screens, and shall have two drilled holes ($1\frac{1}{4}$ " O.C. for No. 8 self-tapping screws) in each upper inside corner for shade brackets. Muntins, when required, shall be hot rolled tees, welded to sash members and with welded cross joints.

4. **Weatherstripping**—shall be stainless steel and applied to sash at sill and meeting rail, and to frame at head and jambs. Weathering or rubbing blocks shall be attached to the parting strip opposite meeting rail ends. Attaching screws shall be of stainless steel.

5. **Sill Vents**—(when required) shall be made of cold rolled tubular members matching those in double-hung unit size and construction and shall be built integral with the frame thereof. Stainless steel weatherstripping shall be provided on all four sides.

6. **Hardware**—Each sash shall be suspended by tapes of stainless steel from two enclosed and removable motor-spring type spring balances designed to properly balance sash when glazed with double strength glass. Balances to be guaranteed against imperfect workmanship and material. Each lower sash shall have a sweep lock and lift handles, one lift for windows less than 2'-8" in width, two lifts for all others. Each upper sash shall have a pull-down handle and sweep lock strike. Lift handles, sweep lock and keeper shall be of bronze, pull-down handle of rustproofed steel. All hardware shall be attached at factory. A bumper shall be attached to frame at head to cushion travel limit of lower sash. Sill vents shall be bottom hinged to open in at top and equipped with two sliding friction arms and a bronze cam acting locking handle, two handles for units 2'-8", and greater, in width.

7. **Mullions**—Mullions for joining two or more single units in the same opening shall be specially designed to permit rigid assembly and complete weathertightness.

8. **Shop Finish**—Windows shall be bonderized and finished with a dip coat of gray Bakelite (phenol-resin) paint, oven-baked for one hour at 300 degrees Fahrenheit.

9. **Screens**—Screens shall be either full top hung or fixed half screens, as specified, and shall be set in the rebate provided in window frame. Screens shall have 18 x 14 mesh bronze or galvanized steel screen cloth and rewirable frames of electro-galvanized steel, bonderized and primed with one coat of enamel, baked on. Horizontal braces shall be furnished at center of full top hung screens for windows over 4'-5 $\frac{1}{2}$ " in height. Screen fittings shall be of a design permitting screens to be installed or removed from within the building.

10. **Casings**—Casings, where required, shall be formed from 18 gauge, smooth, flat, blue annealed steel sheets. They shall be L shaped with a 1" wide inside face, offset at its outer edge and finishing flush with the plaster. Anchors holding outside edge of casing securely in place shall be furnished and installed on approximately 2'-0" centers around entire perimeter. Corners shall be fitted to a hairline crack with mortise and tenon joints designed for field assembly. Attachment to windows shall be effected with self-tapping screws concealed from view after window assembly is installed. Shop finish shall be the same as specified for windows.

11. **Cleaner Anchors**—Window cleaner anchors (when required in multi-storied buildings) shall be of forged bronze and shall be attached to jambs of those windows having exterior sill heights more than 7'-0" above finished grade, walks, porches, adjoining roofs, etc. Design and attachment of anchors shall comply with local and state regulations. Provide two cleaner anchors per each single window unit. They shall be centered 44" above the window sill and shipped loose for field attachment before setting of windows. Steel tap holes not less than $\frac{5}{16}$ " thick and 6" long shall be welded in shop to the inside face of window casings and anchors shall be attached thereto with not less than three $\frac{3}{8}$ " diameter round head machine screws to the full thickness of the tap plate. Attaching screws shall be of the same metal alloy as the cleaner anchors.

12. **Erection**—Windows shall be set plumb and true in opening, securely anchored and held in alignment during construction. The spreader clips at ends of meeting rail shall not be removed until windows are ready for glazing. Contacts between windows and adjacent steel, including mullions, shall be sealed with mastic furnished and applied by the erector.

13. **Glazing**—(By others). Glazing shall be from the exterior by means of copperclad steel glazing clips and steel sash putty furnished by others; glass shall be not heavier than double strength.

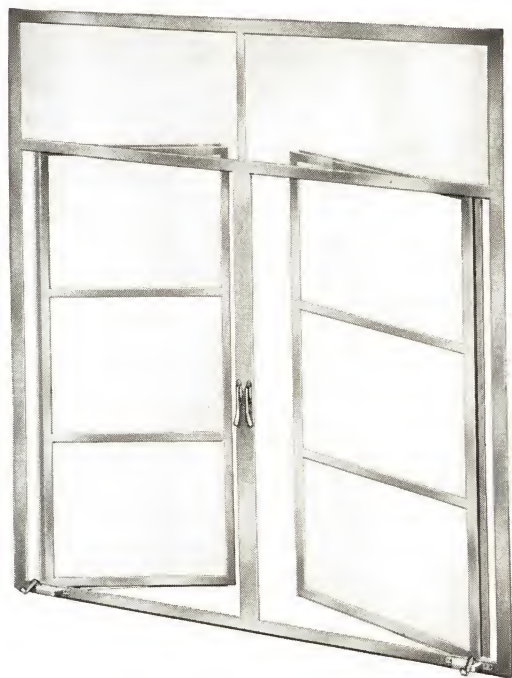
14. **Field Painting**—See project painting specifications.

15. **Caulking**—Joints between window frame and masonry shall be carefully caulked by caulking contractor.



Halifax Consolidated School, South Boston, Va.
Stainback & Scribner, Charlottesville, Va., Archts.; J. E. Burton, Contr.

TRUSCON ALUMINUM CASEMENTS



Sizes

Truscon Aluminum Casements are available from warehouse stocks in either modular or regular widths. The height dimension is identical for either type. Modular widths provide the advantages of coordinated modular construction. All windows in 2, 3 and 4 light widths are dimensioned in multiples of sixteen inches, conforming to standard concrete block dimensions.

Modular widths offer approximately 8% additional light area and ventilation per window opening. This feature alone is important as various building codes and Federal Specifications dictate the minimum acceptable glass area for a given room area.

Regular width aluminum casements are also available from warehouse stock. Regular sizes conform to the standard width and height dimensions of steel casement windows.

The Truscon Aluminum Residential Casement is presented as an aluminum window with a plus value. From the depth of sections, through the hinge design, to its final hardware, the factor of quality was considered of prime importance in the production of this aluminum window.

Construction — Heavy extruded aluminum sections are used throughout. All corners of both frame and ventilator are electronically fused on flash welders and milled to a smooth finish. The extra heavy $1\frac{1}{8}$ " deep ventilator section provides the rigidity required to adequately stiffen the ventilator.

The aluminum hinge is a truss type to insure maximum strength and still retain the slim architectural lines so popular in properly designed steel and aluminum casements. No carbon steel, with or without protective coatings, is used in the manufacture of these Aluminum Casements. Such accessories as the operator guide channels and the locking handle keepers are all of stainless steel.

Hardware — Roto operators are of a die-cast aluminum and are buffed to a satin sheen before the clear preservative lacquer is applied. Also available at a reduced cost are roto operators manufactured of die-cast zinc with a baked on coat of aluminum paint.

Screens and Storm Sash — Truscon aluminum casement screens and storm sash are made specifically for these windows. Installation is on the inside by means of swivel clips.

SPECIFICATIONS

1. Specify — Aluminum Residential Casements as furnished by Truscon Steel Division, Republic Steel Corporation, Youngstown, Ohio.

2. Material — All members shall be of solid extruded aluminum alloy 63S-T5, not less than $1\frac{3}{8}$ " deep with the ventilator member being not less than $1\frac{1}{8}$ " deep and $\frac{3}{16}$ " in web thickness (commercial tolerances observed).

3. Construction — All corners of frame and ventilator bars shall be electronically fused on flash welders and milled to a smooth finish.

4. Finish — After fabrication, the windows shall be chemically cleaned and receive a dip coat of metha-crylate lacquer.

5. Hardware — The roto operator housing and handle shall be of aluminum die-cast material with a heavy aluminum operating arm. The housing and handle shall be brushed to a smooth finish and a clear lacquer applied. Guides, guide buttons and keepers for locking handles shall be of stainless steel.

The locking handle shall be of zinc die-cast material, with a clear coat of lacquer applied.

Fins of hot galvanized steel shall be furnished (at extra cost) where detailed, attached with aluminum bolts and nuts.

6. Screens — Screens shall be of aluminum throughout and be wired with an 18 x 14 mesh screen cloth.

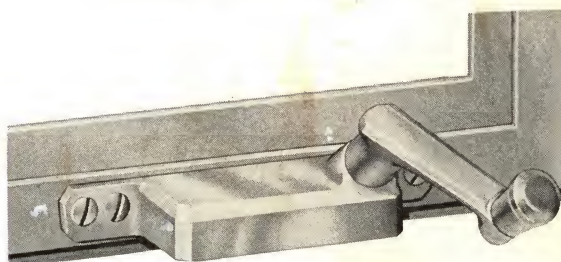
7. Erection — All openings shall be squared before installation of the windows. Windows shall be promptly cleaned of all wet plaster, mortar or cement.

8. Glazing — Windows shall be outside glazed with glazing clips and metal sash putty. All glazing and glazing materials will be furnished by others.

See page 20 for installation details.



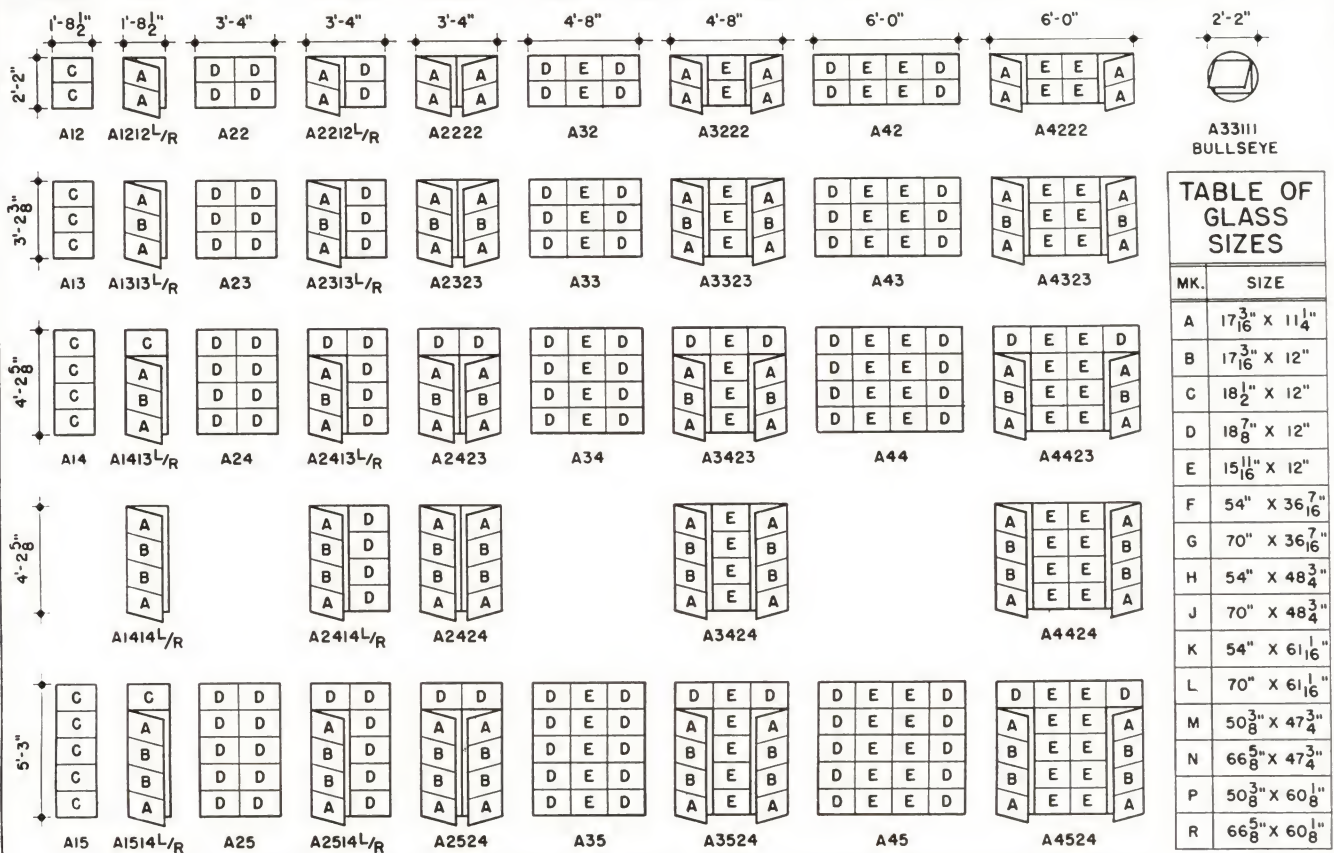
Truss type aluminum hinge with stainless steel pin



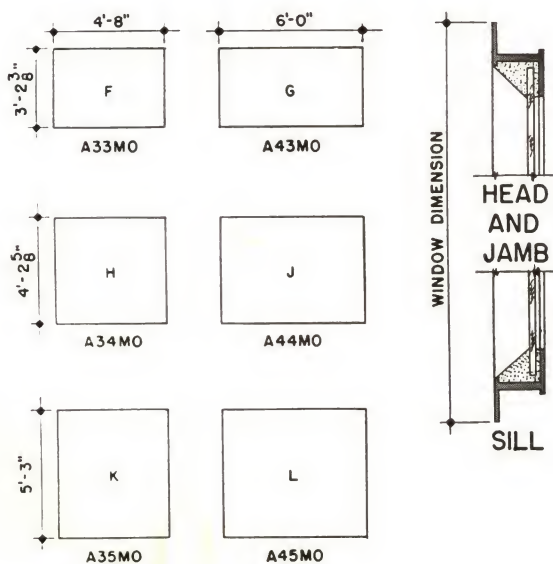
Polished aluminum die cast roto operator with aluminum arm and stainless steel accessories

TRUSCON ALUMINUM CASEMENTS

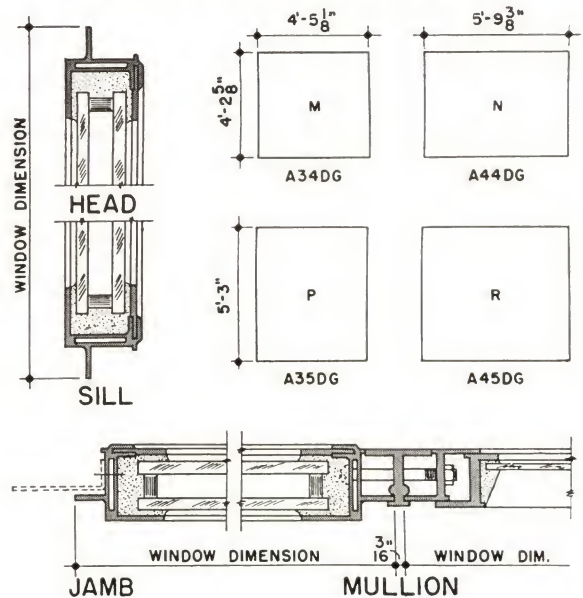
MODULAR SIZES



PICTURE WINDOWS - SINGLE GLASS



PICTURE WINDOWS - DOUBLE GLASS FOR STOCK SIZE DOUBLE INSULATING GLASS



- DIMENSIONS SHOWN ARE WINDOW DIMENSIONS.
- ELEVATIONS ARE SHOWN AS VIEWED FROM THE OUTSIDE. HAND OF CASEMENTS IS DETERMINED BY LOCATION OF HINGES AS VIEWED FROM THE OUTSIDE.
- SINGLE GLASS PICTURE WINDOWS ARE SHIPPED ASSEMBLED.
- DOUBLE GLASS ("DG") UNITS ARE SHIPPED KNOCKED DOWN FOR FIELD ASSEMBLY.
- "DG" PICTURE WINDOW UNITS ACCOMMODATE 1" THICK STANDARD SIZE INSULATING GLASS.
- FOR STUD OPENING OR ROUGH OPENING SIZES USE WINDOW DIMENSIONS SHOWN AND ADD 1¹/₂" IN WIDTH AND 1¹/₂" IN HEIGHT.

TRUSCON ALUMINUM CASEMENTS

REGULAR—TYPES AND SIZES

(Window types shown on this page fit standard steel casement opening sizes)

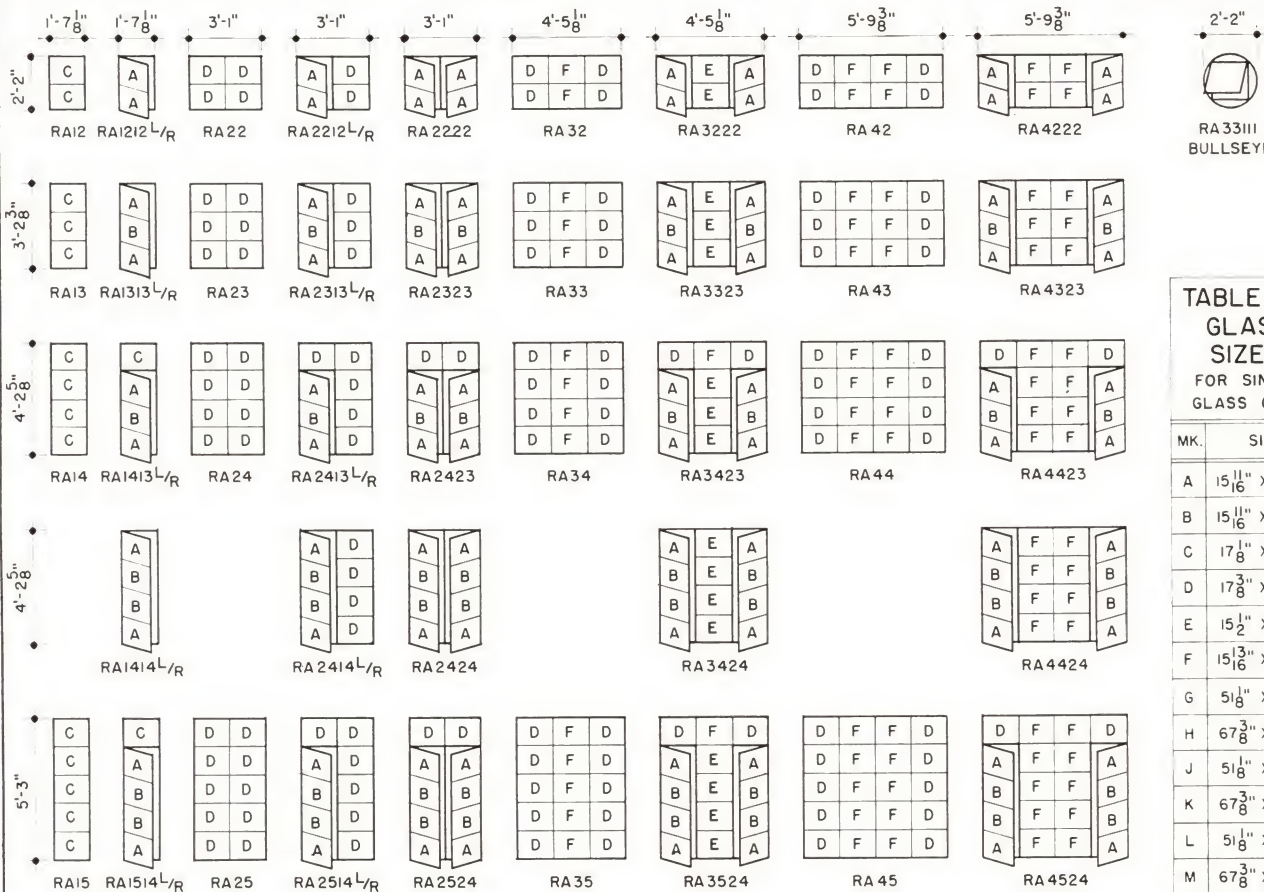
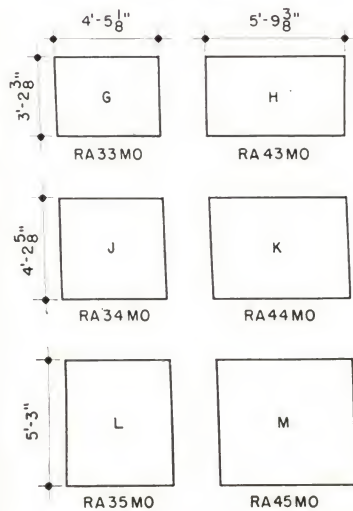


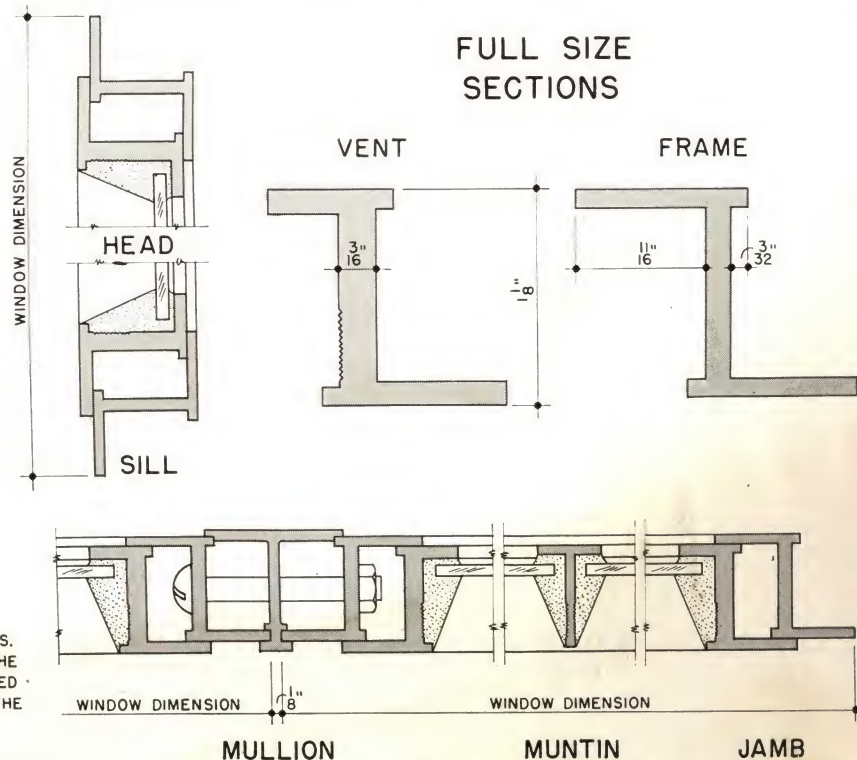
TABLE OF
GLASS
SIZES
FOR SINGLE
GLASS ONLY

MK.	SIZE
A	15 11/16" X 11 1/4"
B	15 11/16" X 12"
C	17 1/8" X 12"
D	17 3/8" X 12"
E	15 1/2" X 12"
F	15 3/16" X 12"
G	51 1/8" X 36 7/16"
H	67 3/8" X 36 7/16"
J	51 1/8" X 48 3/4"
K	67 3/8" X 48 3/4"
L	51 1/8" X 61 1/16"
M	67 3/8" X 61 1/16"

PICTURE WINDOW UNITS



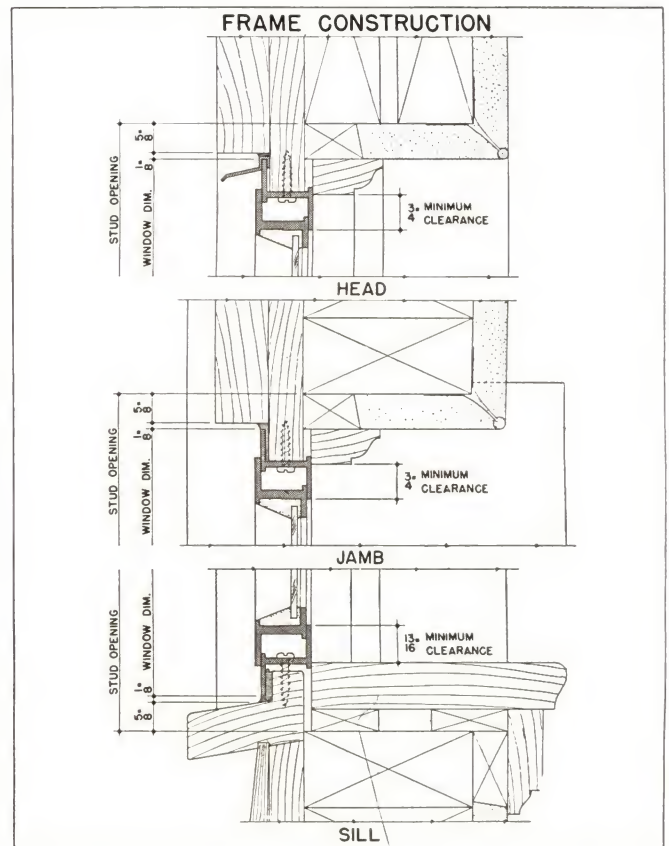
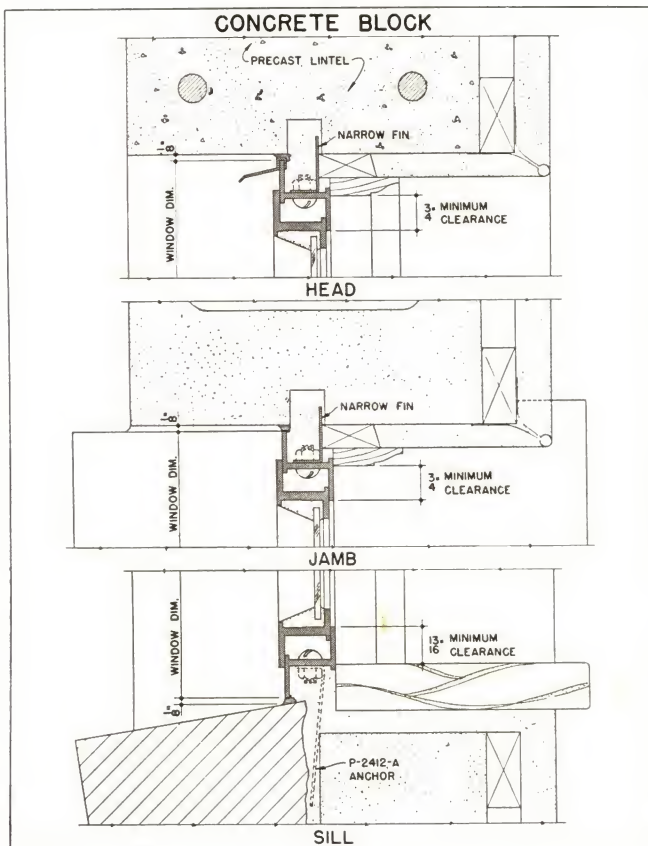
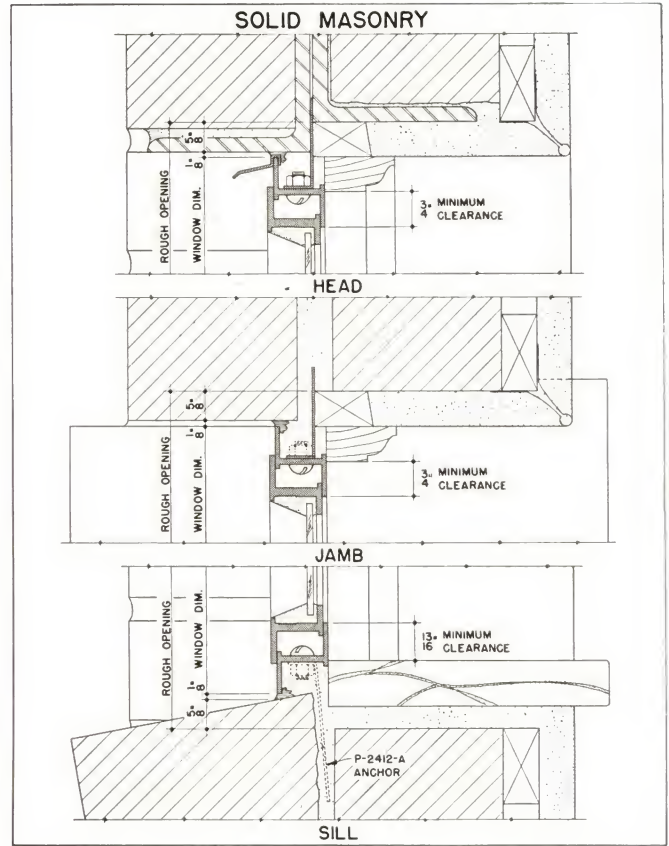
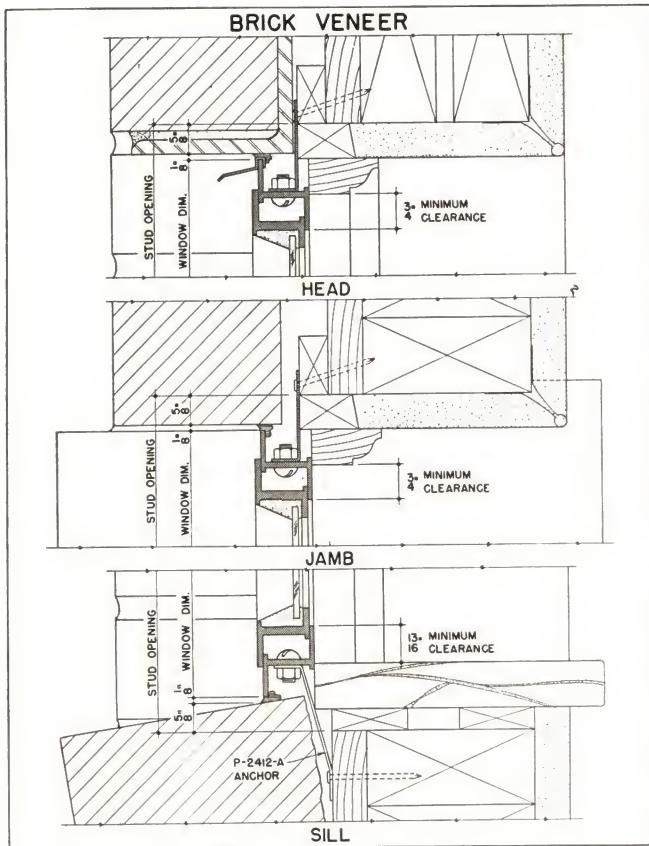
FULL SIZE SECTIONS



- DIMENSIONS SHOWN ARE WINDOW DIMENSIONS.
- ELEVATIONS ARE SHOWN AS VIEWED FROM THE OUTSIDE. HAND OF CASEMENTS IS DETERMINED BY LOCATION OF HINGES AS VIEWED FROM THE OUTSIDE.

TRUSCON ALUMINUM CASEMENTS

INSTALLATION DETAILS



TRUSCON ALUMINUM AWNING WINDOWS



GENERAL DESCRIPTION

The Truscon Aluminum Awning Window, one of the latest additions to Truscon's unmatched line of metal windows, is equally suited to residences, schools or hospitals; wherever the maximum in light and ventilation is required.

MODULAR OR REGULAR SIZES

Truscon Aluminum Awning Windows are manufactured and warehoused in Modular Sizes. All window widths are multiples of 16" to conform to standard concrete block or modular brick dimensions. Modular widths offer approximately 8% greater light and ventilating area per window opening together with substantial on-the-job construction savings.

Truscon Aluminum Awning Windows are also manufactured and warehoused in Regular Sizes conforming to the standard width and height dimensions of steel casement windows.

CONSTRUCTION

Heavy extruded aluminum sections having a minimum frame depth of 1 7/8" are used in the construction of Truscon Aluminum Awning Windows. The combined weight of the frame and ventilator is almost one pound per lineal foot (jamb section .625 lb. per ft., ventilator section .354 lb. per ft.).

Ventilators are designed to permit the washing of the window, including the top ventilator, from the inside of the building.

Perfect weathertight operation is assured by the vinyl plastic weatherstripping which completely seals the entire perimeter of all ventilators when they are closed. Window sections are designed to provide two metal to metal contact points plus the third vinyl plastic contact. Thus, the ventilator is triple sealed to assure complete weather protection.

PACKAGING

All windows in warehouse stocks are packed in

heavy cartons for complete protection during shipment and storage on the job site.

FINISHING PROCESS

After fabrication, all windows are chemically cleaned and etched in a weak hot acid bath followed by a dip coat of metha-crylate lacquer. This process results in a clean window with a smooth, even satin appearance. The lacquer coating protects the window from plaster and mortar stains.

When specified on quantity orders, Truscon will furnish a standard anodized finish at additional cost.

SCREENS AND STORM SASH

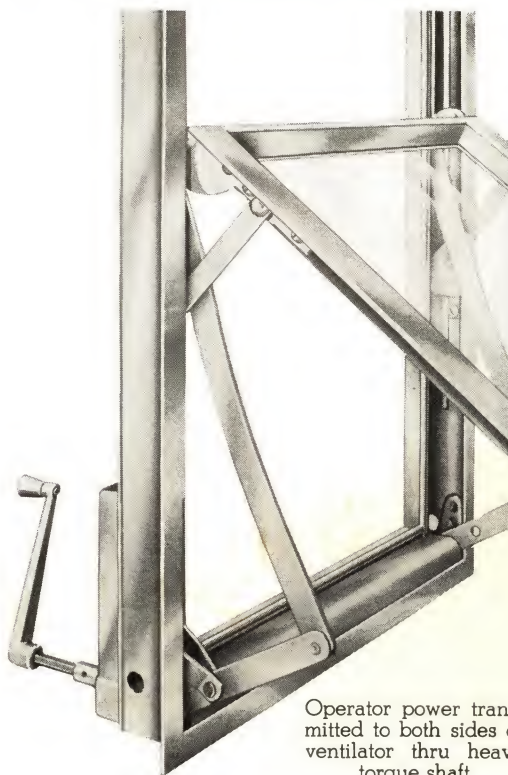
Screens and storm sash are available for Truscon Aluminum Awning Windows. Both are installed on the inside of the window by means of simple attaching clips.

OPERATING HARDWARE

Truscon is offering an exclusive operating mechanism that is unmatched for its positive action and sturdy design. The operator is constructed with cut-steel, case-hardened, operating gears that are designed to last the life of the building.

In Truscon's operator design, the power applied to the operator is transmitted equally to each side of the ventilator through a heavy cadmium plated steel torque shaft. With a fully equalized opening force applied to each side of the ventilators, glass breakage is eliminated and a long life of trouble-free operation is assured.

All ventilators are equipped with life time, self-lubricating nylon sliding shoes and are controlled by heavy aluminum swing arms. The linkage controlling the ventilators is concealed within the jambs safe from the weather, and out of sight. The windows leave the factory with all operating hardware installed and all windows adjusted for perfect operation.

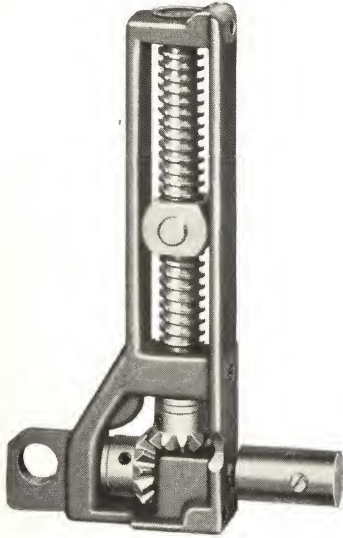


Operator power transmitted to both sides of ventilator thru heavy torque shaft

TRUSCON ALUMINUM AWNING WINDOWS

OPERATOR FEATURES

The operator on Truscon Aluminum Awning Windows is built on the power principle of the common automobile jack. The gears of this operator are cut-steel, case-hardened. The use of such hardened operating gears permits the ventilators to be closed to the full point of resistance without the danger of undue wear or stripping of the operator mechanism. This is of particular advantage in schools and public buildings where people use unnecessary energy when opening or closing windows. With Truscon's cut-steel, case-hardened gears the possibility of shearing gear teeth is eliminated. The windows are shipped from the factory with the operating hardware installed and protected by a heavy aluminum housing.



Cut-steel, case-hardened operator gears

EASY ADJUSTMENT

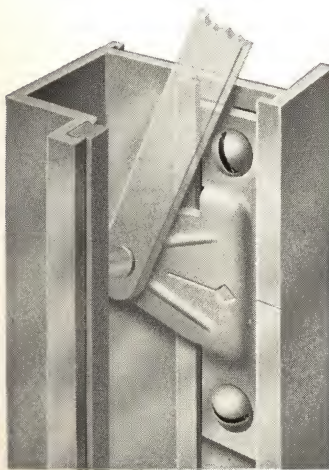
All windows are shipped with hardware installed and ventilators adjusted for perfect operation. No field adjustment is normally required. If necessary, due to rough handling during transportation, adjustment is accomplished by means of the small adjusting block shown in the accompanying illustration. There is one such block for each side of each ventilator.

MAXIMUM SIZES

Through many years of window experience Truscon has learned that for satisfactory window operation it is very necessary to stay within certain specified limitations. To exceed these limitations is to jeopardize the quality and function of the window.

Through experiments with the aluminum window sections of the depth and weight used for this type of window, Truscon has established the following recommended limitations. For operation from a single operator, the maximum window width shall be 4'8", and the maximum window height shall be 8'1 $\frac{5}{8}$ ". Truscon does not recommend the manufacture of aluminum awning windows exceeding either of these dimensions.

It is suggested that the architect, for purposes of economy, maintain standard window heights as detailed in this catalog. This permits the use of standard operating linkage. It is recommended further that widths detailed in this catalog also be used where possible. However, if it is absolutely necessary, the widths may be varied slightly and still maintain satisfactory window operation.



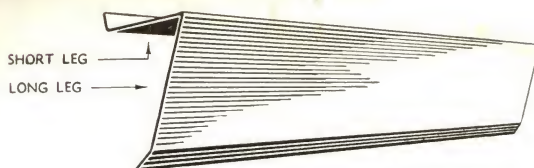
Adjusting block

GLAZING

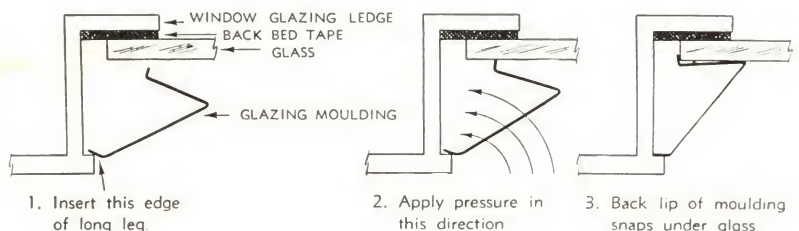
Truscon Aluminum Awning Window ventilators are designed for outside glazing with either single leg glazing clips and metal sash putty or with aluminum glazing moulding. The latter feature permits the glazing of the aluminum awning window without the use of any putty. A back bed tape is furnished to-

gether with mitered aluminum glazing strips cut to length and ready to be quickly snapped into place after the tape is applied and the glass is set. Moulding is furnished at extra cost.

Maximum glass thicknesses are $\frac{1}{8}$ " with aluminum glazing moulding and $\frac{1}{2}$ " with glazing clips and putty.



GLAZING MOULDING



TRUSCON ALUMINUM AWNING WINDOWS

SPECIFICATIONS

1. **Specify** — Aluminum Awning Windows as furnished by Truscon Steel Division, Republic Steel Corporation, Youngstown, Ohio.

2. **Material** — All members shall be of solid extruded 63S-T5 aluminum alloy. Overall depth of the frame shall be a minimum of 1 3/8". Overall depth of ventilator sections shall be 1". Combined weight of frame and ventilator shall be not less than 0.975 pounds per foot. The torque bar shall be of steel, cadmium plated. All operating arms, bolts, pins, rivets, etc., shall be either aluminum alloy or stainless steel.

3. **Construction** — All corners of frame and ventilators shall be neatly formed, coped to a true fit and mortise and tenon riveted. All weathering contacts shall be sealed tightly when vents are in a closed position by use of vinyl plastic weatherstripping, shop installed in interlocking grooves extruded in the aluminum section. Weatherstripping shall be continuous and concealed from the weather. All ventilators shall operate in such manner as to permit easy washing of the exterior surface from inside of the building.

4. **Finish** — After fabrication, all windows shall be chemically cleaned and etched in a weak hot acid bath, followed by a dip coat of methacrylate lacquer.

5. **Hardware** — The worm and gear type operator shall be shop attached. Gears shall be cut-steel, case-hardened, and protected by a heavy aluminum housing. Self lubricating nylon bearings shall be used for the sliding hardware in the window jambs.

Push bar operators, where specified, in place of worm and gear type, shall be of a design that will permit operation of the ventilators without interference with standard fixed screens. Operation shall be through the window jambs in such a manner that ventilators can be closed by means of interior control. The push bar mechanism shall securely maintain ventilators in any open position and shall provide a positive locking action in the closed position.

6. **Hopper Ventilators** — Hopper ventilators shall be furnished

as an integral part of the window. Two locking handles shall be provided on all windows exceeding 2'8" in width. Hinges shall be not less than 3 3/8" in length with three hinges provided for all windows over 3'4" in width. Weatherstripping shall be installed around the ventilator perimeter. Operating arms shall be equipped with friction shoes to hold the ventilator open at any desired angle.

7. **Operation** — Power from the operator shall be transferred equally to both sides of the ventilator by means of a heavy torque shaft. This shaft shall be completely protected by a removable aluminum cover. A reverse pivot action in the ventilators shall function just prior to the completion of the closing cycle and shall exert an additional pressure on both sides of the ventilator. This additional force shall seal the ventilator tight against the frame member and its weatherstripping without the use of any auxiliary latches or keepers.

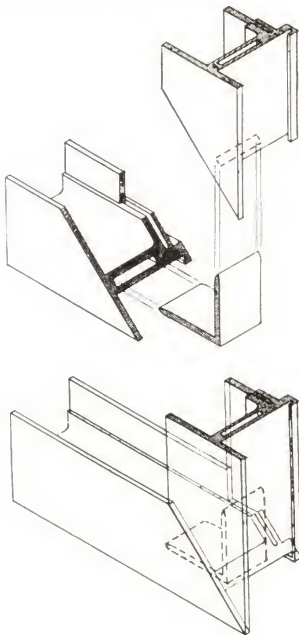
8. **Packaging** — All windows shall be protected during shipment and storage by heavy corrugated cardboard cartons, two windows per carton.

9. **Fins** — (Optional at extra cost). 18 gauge hot galvanized steel fins shall be furnished where detailed. Necessary aluminum bolts and nuts shall be furnished.

10. **Screens** — Screens shall be of aluminum throughout and shall be wired with an 18 x 14 mesh screen cloth.

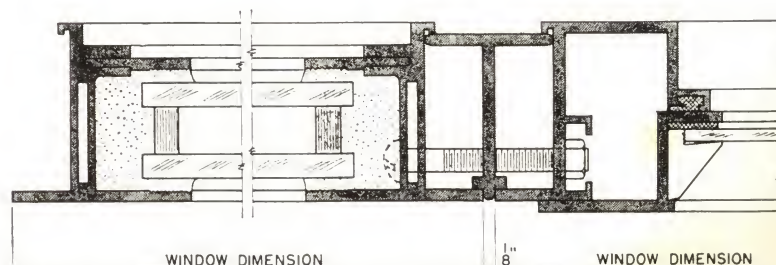
11. **Erection** — All openings shall be accurately squared and plumbed before installation of the window. All wet plaster, mortar or cement shall be promptly cleaned from all window surfaces. Window adjustment shall be checked before glazing.

12. **Glazing** — Windows shall be designed for glazing from the outside. Glazing may be accomplished by the use of glazing clips and metal sash putty, or by means of a backed tape and mitered, cut to length, snap in aluminum glazing moulding. Glazing moulding is furnished at small additional cost when specified. Picture window units requiring double insulating glass shall be inside glazed.



DOUBLE GLASS PICTURE WINDOW UNITS

- DOUBLE GLASS ALUMINUM PICTURE WINDOW UNITS ARE SHIPPED KNOCKED DOWN FOR FIELD ASSEMBLY.
- WHEN USED IN CONJUNCTION WITH OTHER ALUMINUM AWNING WINDOWS, MULLIONS MUST BE ORDERED.
- WINDOWS ARE FURNISHED WITH GLAZING STRIPS AS SHOWN. GLAZER TO PROVIDE ANY ADDITIONAL NECESSARY GLAZING PREPARATION.
- DOUBLE GLASS PICTURE WINDOW UNITS ACCOMMODATE STOCK SIZES OF DOUBLE INSULATING GLASS. SEE PAGES 24 AND 25 FOR AVAILABLE SIZES.
- MAXIMUM DOUBLE GLASS THICKNESS IS 1"



JAMB SHOWN
HEAD & SILL SIMILAR

MULLION

DOUBLE GLASS PICTURE WINDOWS

The Truscon Double Glass Picture Window units are designed to permit the installation of the large sheets of double insulating glass from *inside* the building. This glazing provision is important on either single or

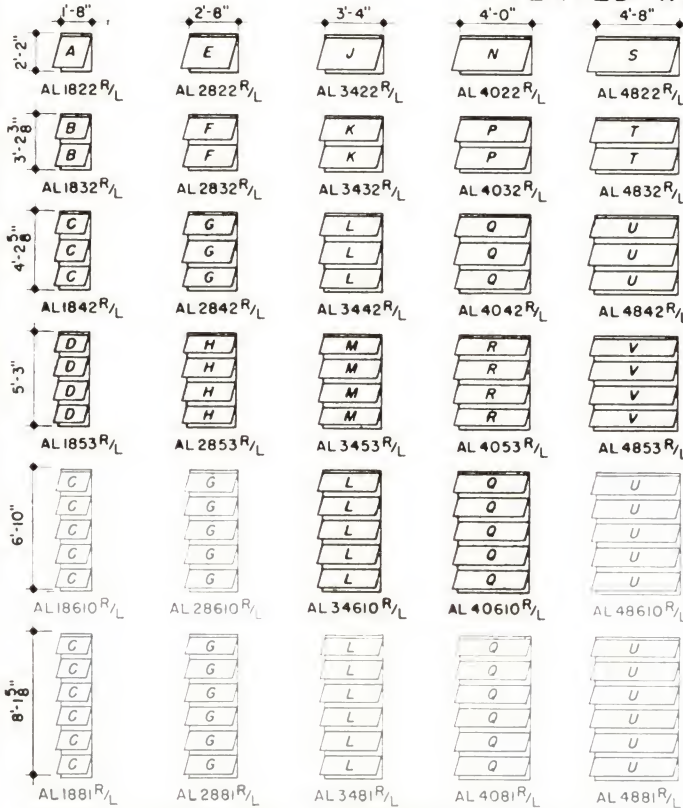
multi-story buildings.

Window types shown on pages 24 and 25 accommodate standard stock sizes of double insulating glass.

TRUSCON ALUMINUM AWNING WINDOWS

MODULAR TYPES AND SIZES

VENTED WINDOWS

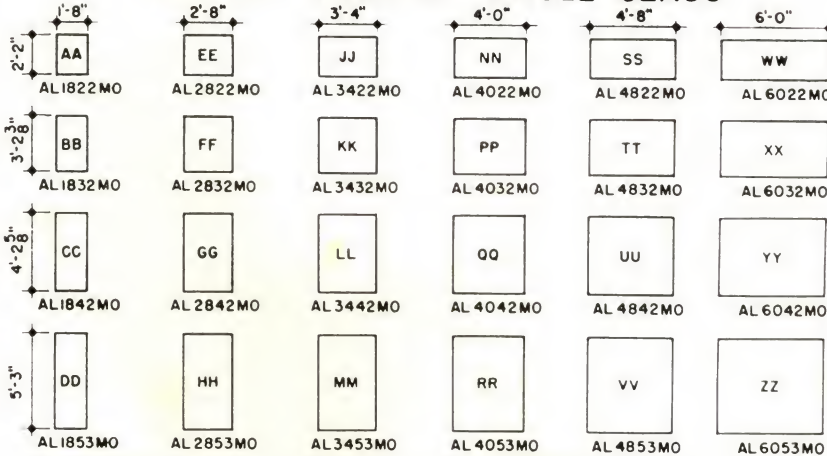


IMPORTANT—
HAND OF WINDOW IS DETERMINED BY LOCATION OF OPERATOR WHEN VIEWED FROM INSIDE.

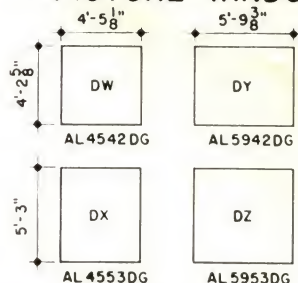
NOTES

- DIMENSIONS SHOWN ARE WINDOW DIMENSIONS.
- WINDOWS ARE SHOWN AS VIEWED FROM THE OUTSIDE.
- VENTED WINDOWS AND SINGLE GLASS PICTURE WINDOWS ARE OUTSIDE GLAZED.
- PICTURE WINDOWS ARE SHIPPED KNOCKED DOWN FOR FIELD ASSEMBLY.
- FOR STUD OPENING OR ROUGH OPENING SIZES USE WINDOW DIMENSIONS SHOWN AND ADD 1/2" IN WIDTH AND 1/2" IN HEIGHT.
- **WAREHOUSE TYPES** INCLUDE ONLY UNITS PRINTED IN BLACK WITH VENTILATOR ARRANGEMENT EXACTLY AS SHOWN. STANDARD OPERATING HARDWARE IS ATTACHED IN THE SHOP. WINDOWS ARE PREPARED FOR INTERIOR SCREENS.
- **FACTORY SHIPMENT TYPES** INCLUDE ALL WINDOWS SHOWN ON THIS PAGE. FOR UNITS WITH SILL VENTILATORS AND FIXED VENTILATORS, REFER TO PAGE 28.
- **FIXED UNITS WITH MUNTIN BARS.** FIXED UNITS IN SAME SIZES AS SHOWN FOR VENTED UNITS, AND DIVIDED INTO THE SAME NUMBER OF LIGHTS BY HORIZONTAL "T" MUNTIN BARS, ARE AVAILABLE FROM FACTORY ONLY. THESE UNITS ARE ASSEMBLED.
- **COMBINATION FIXED AND VENTED UNITS.** SEE PAGE 28.

PICTURE WINDOWS - SINGLE GLASS



PICTURE WINDOWS - DOUBLE GLASS



- SIZES OF DOUBLE GLASS PICTURE WINDOWS ARE BASED UPON USE OF STOCK SIZE INSULATING GLASS.
- DOUBLE GLASS UNITS ARE GLAZED FROM THE INSIDE.

TABLE OF GLASS SIZES

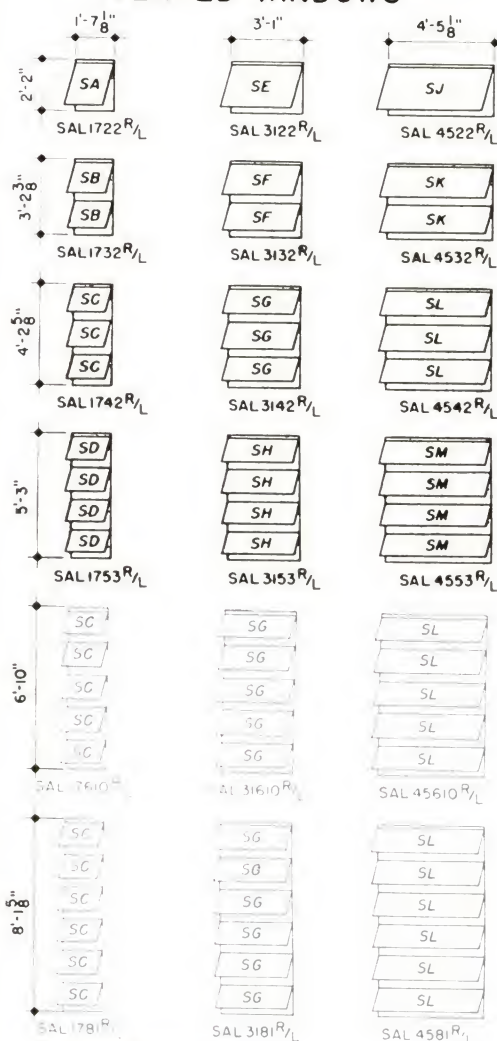
MK.	SIZE	MK.	SIZE
A	16" X 21 5/16"	EE	30" X 24"
B	16" X 16 5/16"	FF	30" X 36 3/8"
C	16" X 14 9/16"	GG	30" X 48 5/8"
D	16" X 13 3/4"	HH	30" X 61"
E	28" X 21 5/16"	JJ	38" X 24"
F	28" X 16 5/16"	KK	38" X 36 3/8"
G	28" X 14 9/16"	LL	38" X 48 5/8"
H	28" X 13 3/4"	MM	38" X 61"
J	36" X 21 5/16"	NN	46" X 24"
K	36" X 16 5/16"	PP	46" X 36 3/8"
L	36" X 14 9/16"	QQ	46" X 48 5/8"
M	36" X 13 3/4"	RR	46" X 61"
N	44" X 21 5/16"	SS	54" X 24"
P	44" X 16 5/16"	TT	54" X 36 3/8"
Q	44" X 14 9/16"	UU	54" X 48 5/8"
R	44" X 13 3/4"	VV	54" X 61"
S	52" X 21 5/16"	WW	70" X 24"
T	52" X 16 5/16"	XX	70" X 36 3/8"
U	52" X 14 9/16"	YY	70" X 48 5/8"
V	52" X 13 3/4"	ZZ	70" X 61"
AA	18" X 24"	DW	50 3/8" X 47 3/4"
BB	18" X 36 3/8"	DX	50 3/8" X 60 1/8"
CC	18" X 48 5/8"	DY	66 5/8" X 47 3/4"
DD	18" X 61"	DZ	66 5/8" X 60 1/8"

TRUSCON ALUMINUM AWNING WINDOWS

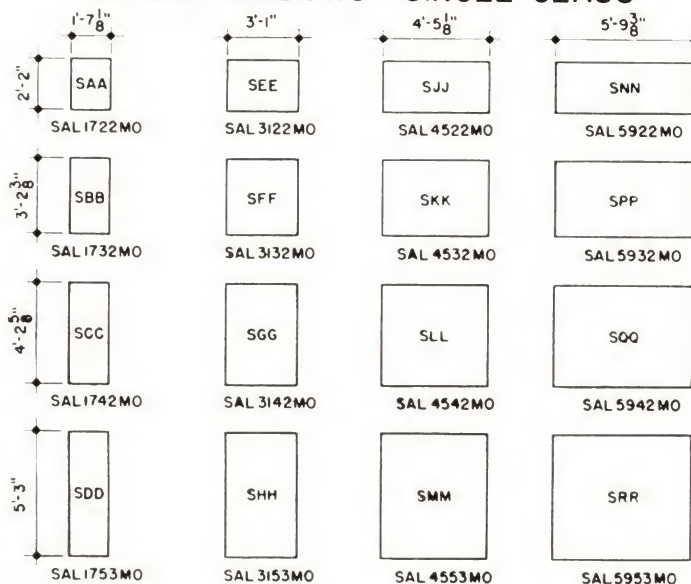
REGULAR TYPES AND SIZES

(Window types shown on this page fit standard steel casement opening sizes)

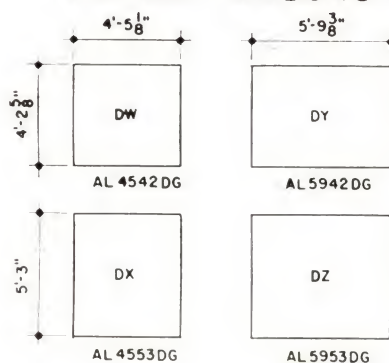
VENTED WINDOWS



PICTURE WINDOWS - SINGLE GLASS



PICTURE WINDOWS - DOUBLE GLASS



- SIZES OF DOUBLE GLASS PICTURE WINDOWS ARE BASED UPON USE OF STOCK SIZE INSULATING GLASS.
- DOUBLE GLASS UNITS ARE GLAZED FROM THE INSIDE.

IMPORTANT—

HAND OF WINDOW IS DETERMINED BY LOCATION OF OPERATOR WHEN VIEWED FROM THE INSIDE.

NOTES

- DIMENSIONS SHOWN ARE WINDOW DIMENSIONS.
- WINDOWS ARE SHOWN AS VIEWED FROM OUTSIDE.
- VENTED WINDOWS AND SINGLE GLASS PICTURE WINDOWS ARE OUTSIDE GLAZED.
- PICTURE WINDOWS ARE SHIPPED KNOCKED DOWN FOR FIELD ASSEMBLY.
- FOR STUD OPENING OR ROUGH OPENING SIZES USE WINDOW DIMENSIONS SHOWN AND ADD $\frac{1}{2}$ " IN WIDTH AND $\frac{1}{2}$ " IN HEIGHT.
- WAREHOUSE TYPES INCLUDE ONLY UNITS PRINTED IN BLACK WITH VENTILATOR ARRANGEMENT EXACTLY AS SHOWN. STANDARD OPERATING HARDWARE IS ATTACHED IN THE SHOP. WINDOWS ARE PREPARED FOR INTERIOR SCREENS.
- FACTORY SHIPMENT TYPES INCLUDE ALL WINDOWS SHOWN ON THIS PAGE. FOR UNITS WITH SILL VENTILATORS AND FIXED VENTILATORS, REFER TO PAGE 28.
- FIXED UNITS WITH MUNTIN BARS. FIXED UNITS IN SAME SIZES AS SHOWN FOR VENTED UNITS, AND DIVIDED INTO THE SAME NUMBER OF LIGHTS BY HORIZONTAL "T" MUNTIN BARS, ARE AVAILABLE FROM FACTORY ONLY. THESE UNITS ARE ASSEMBLED.
- COMBINATION FIXED AND VENTED UNITS. SEE PAGE 26.

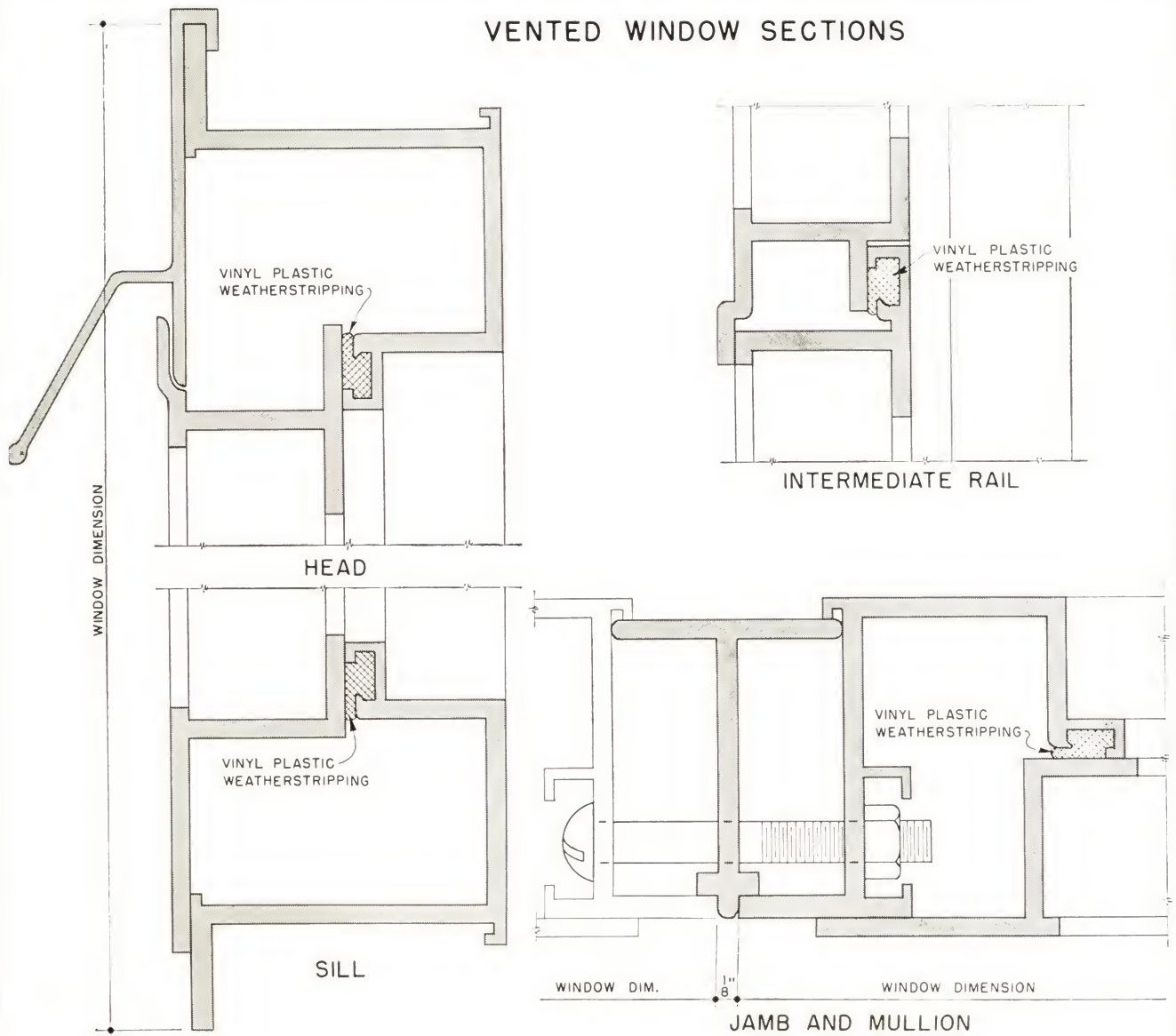
TABLE OF GLASS SIZES

MK.	SIZE	MK.	SIZE	MK.	SIZE
SA	15 $\frac{1}{8}$ " X 21 $\frac{5}{16}$ "	SM	49 $\frac{1}{8}$ " X 13 $\frac{3}{4}$ "	SLL	51 $\frac{1}{8}$ " X 48 $\frac{5}{8}$ "
SB	15 $\frac{1}{8}$ " X 16 $\frac{5}{16}$ "	SAA	17 $\frac{1}{8}$ " X 24"	SMM	51 $\frac{1}{8}$ " X 61"
SC	15 $\frac{1}{8}$ " X 14 $\frac{3}{16}$ "	SBB	17 $\frac{1}{8}$ " X 36 $\frac{3}{8}$ "	SNN	67 $\frac{3}{8}$ " X 24"
SD	15 $\frac{1}{8}$ " X 13 $\frac{3}{4}$ "	SCC	17 $\frac{1}{8}$ " X 48 $\frac{5}{8}$ "	SPP	67 $\frac{3}{8}$ " X 36 $\frac{3}{8}$ "
SE	33" X 21 $\frac{5}{16}$ "	SDD	17 $\frac{1}{8}$ " X 61"	SOQ	67 $\frac{3}{8}$ " X 48 $\frac{5}{8}$ "
SF	33" X 16 $\frac{5}{16}$ "	SEE	35" X 24"	SRR	67 $\frac{3}{8}$ " X 61"
SG	33" X 14 $\frac{3}{16}$ "	SFF	35" X 36 $\frac{3}{8}$ "	DW	50 $\frac{3}{8}$ " X 47 $\frac{3}{4}$ "
SH	33" X 13 $\frac{3}{4}$ "	SGG	35" X 48 $\frac{5}{8}$ "	DX	50 $\frac{3}{8}$ " X 60 $\frac{1}{8}$ "
SJ	49 $\frac{1}{8}$ " X 21 $\frac{5}{16}$ "	SHH	35" X 61"	DY	66 $\frac{5}{8}$ " X 47 $\frac{3}{4}$ "
SK	49 $\frac{1}{8}$ " X 16 $\frac{5}{16}$ "	SJJ	51 $\frac{1}{8}$ " X 24"	DZ	66 $\frac{5}{8}$ " X 60 $\frac{1}{8}$ "
SL	49 $\frac{1}{8}$ " X 14 $\frac{3}{16}$ "	SKK	51 $\frac{1}{8}$ " X 36 $\frac{3}{8}$ "		

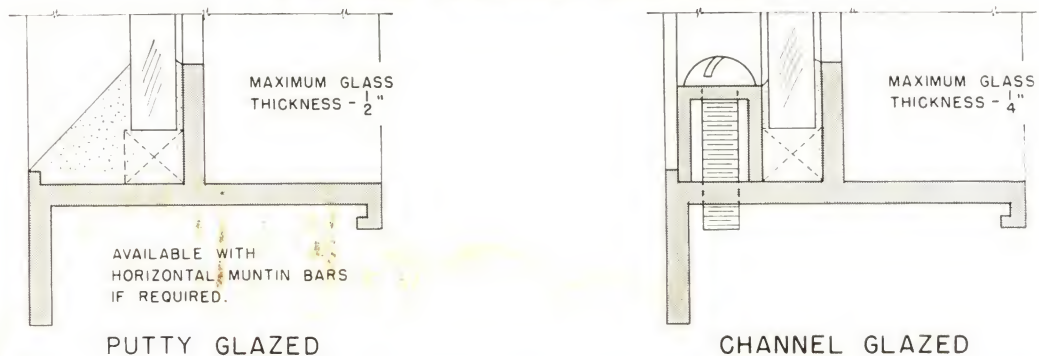
TRUSCON ALUMINUM AWNING WINDOWS

FULL SIZE SECTIONS

VENTED WINDOW SECTIONS



PICTURE WINDOW SECTIONS



Picture windows with horizontal muntin bars or glazing channel are available from factory only.

TRUSCON ALUMINUM AWNING WINDOWS

SPECIAL OPERATORS

Push Bar Operator

The push bar operator is particularly adaptable to school room use. It is furnished only on factory shipped windows when specified.

The push bar may be operated without interfering with standard fixed screens.

Locking the window by means of the push bar is a simple procedure. A downward pressure on the bar closes the ventilators and moves the linkage mechanism past center thereby securely locking the window in position. The window is opened by lifting up on the operating bar. It is not necessary to reach outside the window to operate the push bar.

Chain Controlled Operator

Used where windows are located at unusual heights such as are encountered in factories, power plants, gymnasiums, etc.

Offset Operator

Used where jamb conditions or other obstructions do not permit the use of the standard operator. Furnished when specified on factory shipped windows or available from warehouse for use on stock windows.

45° Operator

45°, 90° and Direct Pole Operators

Used on high windows and activated by manual pole operation. The 45° operator is particularly adaptable to use with Fixed Panel combinations.

90° Operator

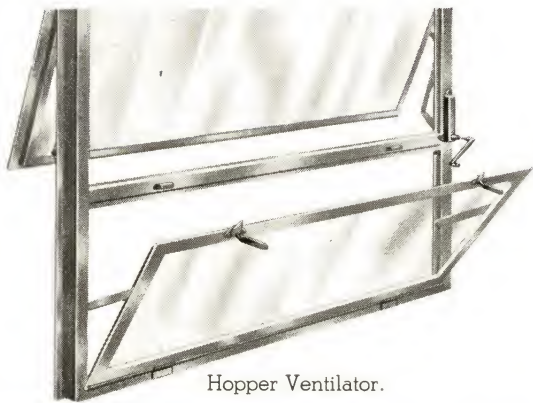
Direct Pole Operator

Standard Operator Pole

Used where window operators are out of reach from the floor.

TRUSCON ALUMINUM AWNING WINDOWS

HOPPER VENTILATORS—FIXED PANEL COMBINATIONS



Hopper Ventilator.

HOPPER VENTILATORS

Awning windows can be furnished with a bottom hinged inward opening hopper ventilator, available from factory only. Overall window heights are the same as those shown on pages 24 and 25. The hopper ventilator replaces a standard down

and out ventilator in either the modular width or regular width window. If desired, the hopper ventilator can be manufactured as a separate window unit.

Two locking handles are provided on all hopper ventilators where the window width exceeds 2'8". Hardware is shop attached. Three hinges are provided on all hopper ventilators where the window width exceeds 3'4". Each hinge is a heavy extrusion not less than 3 $\frac{3}{8}$ " in length.

The ventilator is completely weatherstripped around the entire perimeter. Friction shoes on the operating arms hold the ventilator open in any position.

Screens are available for the hopper ventilator and are installed on the outside of the window by means of two sill clips and a continuous interlocking head member. Installation may be made from inside the room.

FIXED PANEL COMBINATIONS

Custom built windows can be furnished with one or more ventilators fixed provided standard overall window heights are used. The sight lines of ventilated units are maintained at all jambs and meeting rails. Hopper ventilators can be furnished when required. Fixed panels are actually ventilators bolted into position in order to achieve the same appearance as a ventilated window except that the fixed panel may be any number of ventilators high. For fully fixed windows where sight lines are not required, see notes on pages 24 and 25 concerning available types.

It is not necessary to fix any ventilators because of operator limitations. The window sections and operator are sufficiently strong to allow 100% ventilation in all window openings shown in this catalog.

Where the bottom down and out ventilator is beyond reach from the floor it is necessary to use a 45 degree operator as shown on page 27. The torque bar for the down and out ventilators is always located at the bottom rail of the lowest down and out ventilator.

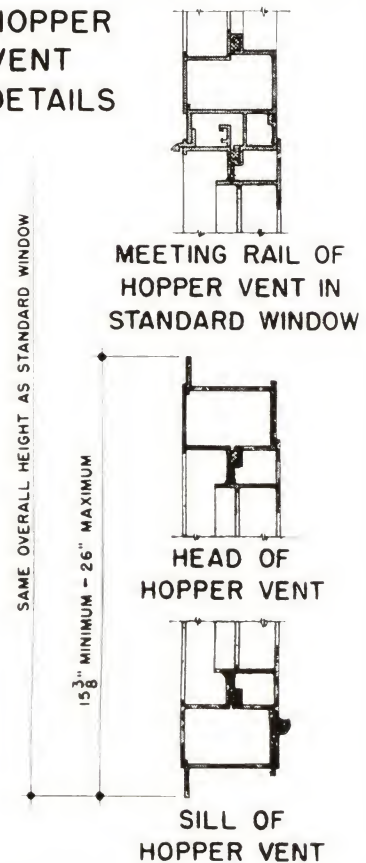
TYPICAL FIXED PANEL COMBINATIONS

(ALL UNITS MATCH SIGHT LINES OF FULLY VENTED WINDOWS)

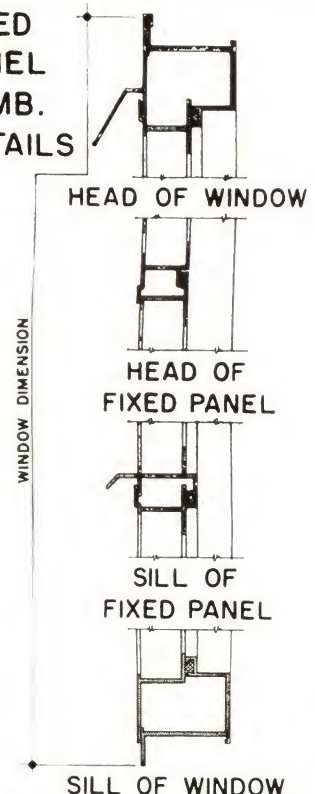


* LOCATION OF OPERATOR — USE A 45° REMOTE CONTROL OPERATOR AND POLE WHEN THIS POINT IS BEYOND REACH OF THE FLOOR.

HOPPER VENT DETAILS



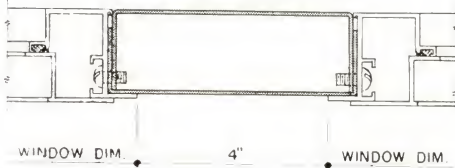
FIXED PANEL COMB. DETAILS



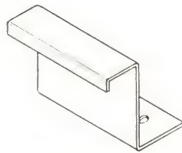
TRUSCON ALUMINUM AWNING WINDOWS

SPECIAL MULLION DETAILS

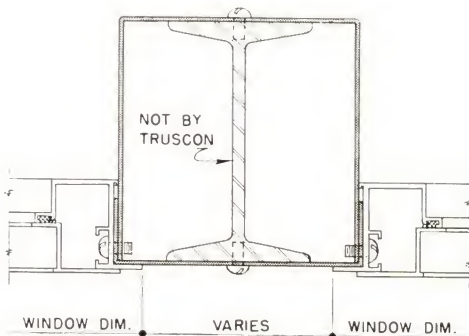
MULLION DETAILS



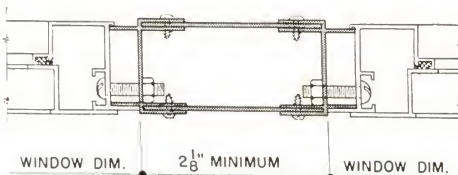
4" STANDARD MULLION



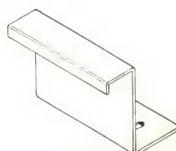
ANCHOR
(HEAD AND SILL)



STRUCTURAL MULLION



ADJUSTABLE MULLION



ANCHOR
(HEAD AND SILL)

4" STANDARD MULLION

- INSIDE MULLION CHANNEL DRILLED AND TAPPED TO RECEIVE $\frac{1}{4}$ "-20 X $\frac{1}{2}$ " R.H.M.S.
- INSTALL ANCHOR AT HEAD AND AT SILL OF MULLION.
- FACTORY SHIPMENT ONLY.

CORNER MULLION

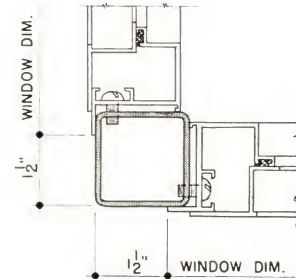
- 2" X 2" TUBE DRILLED AND TAPPED TO RECEIVE $\frac{1}{4}$ "-20 X $\frac{1}{2}$ " R.H.M.S.
- INSTALL ANCHOR AT HEAD AND AT SILL OF MULLION.
- WAREHOUSE SHIPMENT.

STRUCTURAL MULLIONS

- DIMENSIONS DETERMINED BY JOB REQUIREMENTS.
- USE $\frac{1}{4}$ "-20 X $\frac{1}{2}$ " STAINLESS STEEL R.H.M.S. TO ATTACH MULLION COVER PLATES TO STRUCTURAL STEEL MEMBERS.
- MULLION COVER PLATES TO BE DRILLED AND TAPPED IN FIELD.
- FACTORY SHIPMENT ONLY.

NOTE:

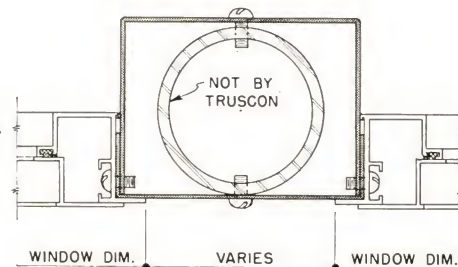
- ALL FORMED MULLION PLATES AND FLAT PLATES ARE 0.091" THICK ALUMINUM.



CORNER MULLION



ANCHOR
(HEAD AND SILL)



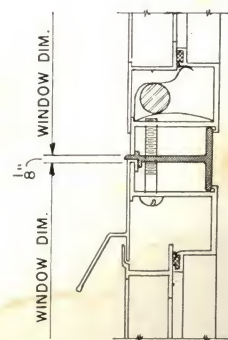
STRUCTURAL MULLION

ADJUSTABLE MULLION

- ATTACH EXTRUDED MULLION SECTIONS TO JAMBS OF EACH WINDOW BEFORE INSTALLATION.
- WIDTH OF FLAT PLATES IS DETERMINED BY JOB REQUIREMENTS.
- PLATES FURNISHED CUT TO SIZE.
- SECURE FLAT PLATES TO MULLION SECTIONS BY STAINLESS STEEL SELF-TAPPING SCREWS. DRILL AND INSTALL IN FIELD.
- INSTALL ANCHOR AT HEAD AND AT SILL OF MULLION.
- FACTORY SHIPMENT ONLY.

HORIZONTAL MULLION

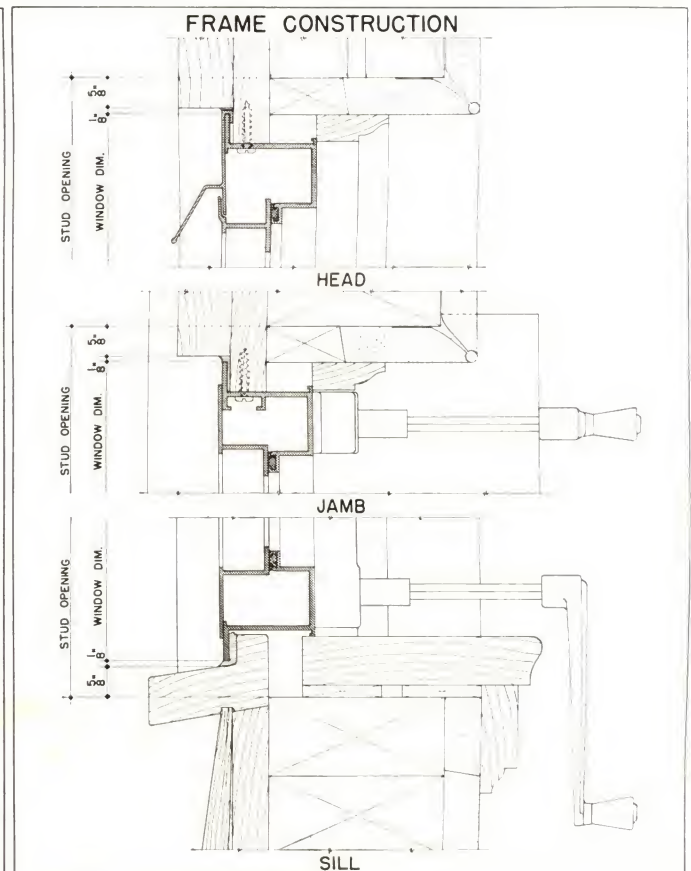
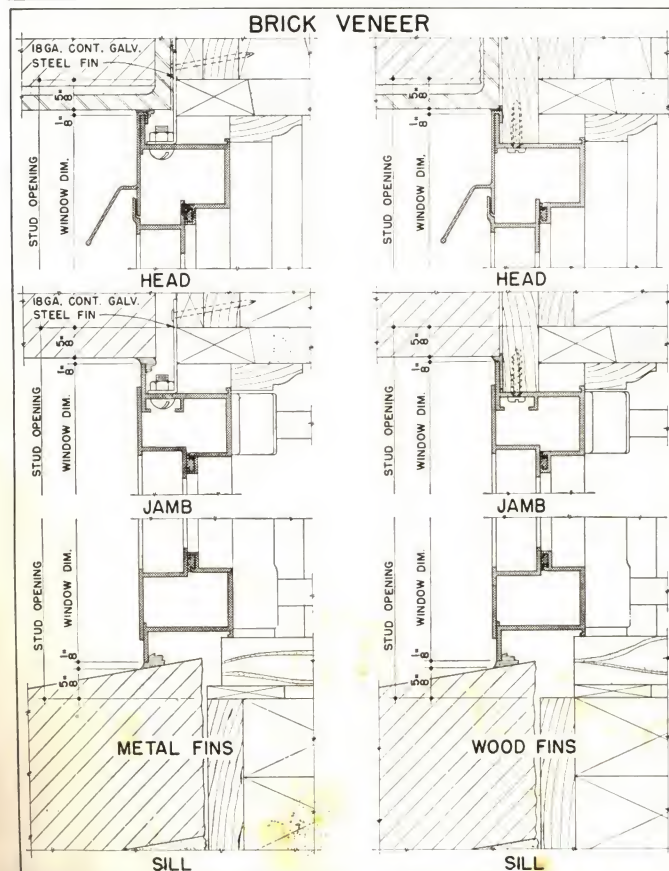
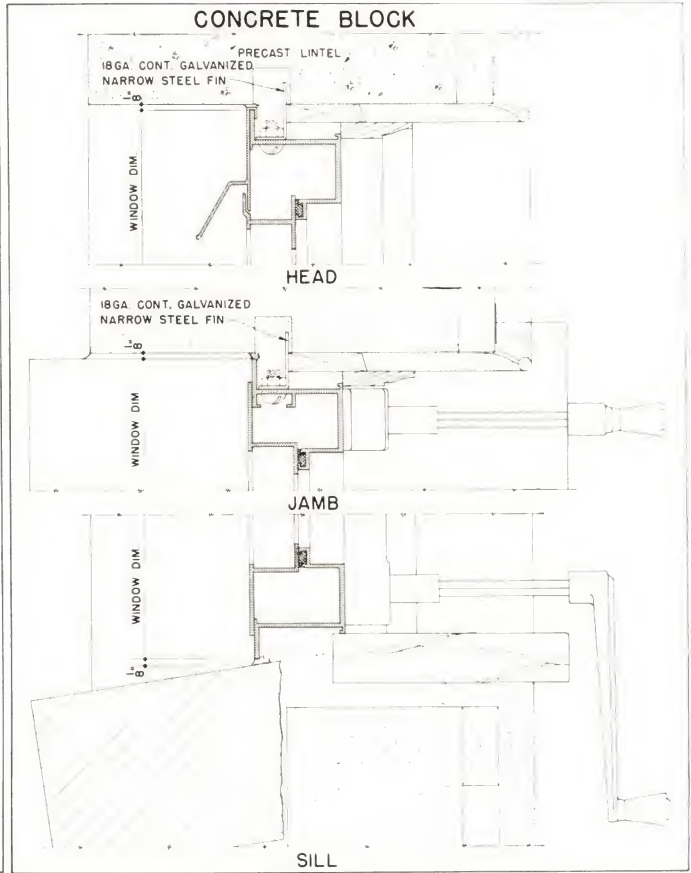
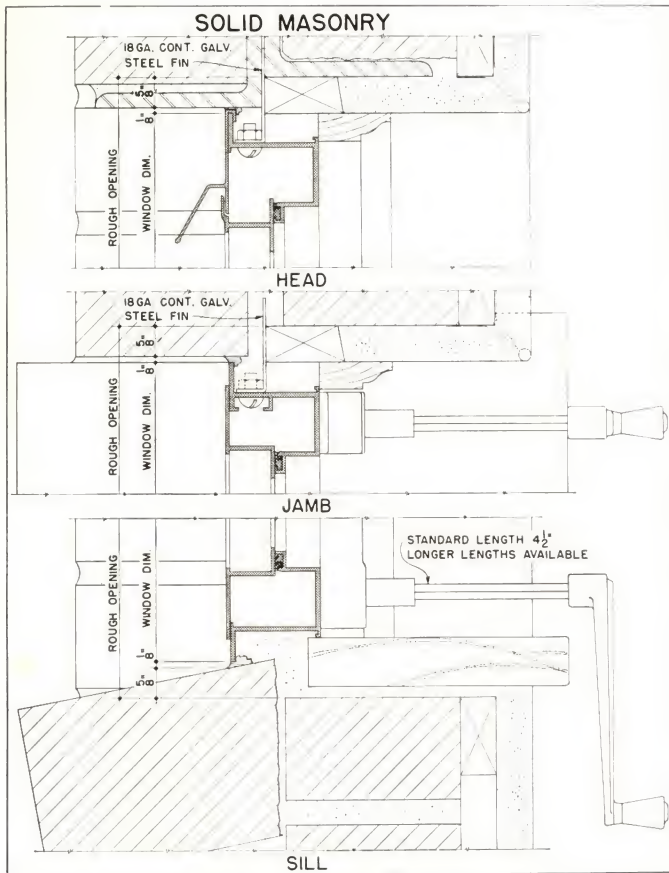
- SILL MEMBER OF UPPER VENTED WINDOW TO BE DRILLED AND TAPPED IN FIELD TO RECEIVE $\frac{1}{4}$ "-20 X $1\frac{1}{16}$ " R.H.M.S. (CUT STANDARD 2" LONG SCREW TO REQUIRED LENGTH.)
- WAREHOUSE SHIPMENT.



HORIZONTAL MULLION

TRUSCON ALUMINUM AWNING WINDOWS

INSTALLATION DETAILS



TRUSCON

Residential

STEEL CASEMENTS

Truscon Residential Casements are offered in the three different classifications depicted at right. These windows are manufactured from 1" sections of heavier than average weight and include many features not usually found in windows of this classification.

Superior design, heavy sections, substantial hardware, highly mechanized line production and nationwide warehouse distribution offer features and service that are highly important to the Architect, Builder and Owner.

When deciding upon a source of supply for this popular type of window, attention is called to the extra value included in the Residential Casement as produced by Truscon.

Refer to full size section below for further interesting information.

Steel Stools — See page 39.

Complete Trim — See pages 40 and 41.

Steel Casings — See pages 42 and 43.

Steel Surrounds — See pages 44 and 45.

Casement Doors — See page 34.

Specifications — See page 46.



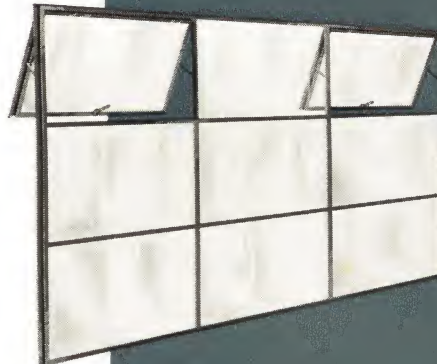
ROTO CASEMENTS

Types and Sizes
on page 33.



SIMPLEX CASEMENTS WITH SILL VENT

See page 35.



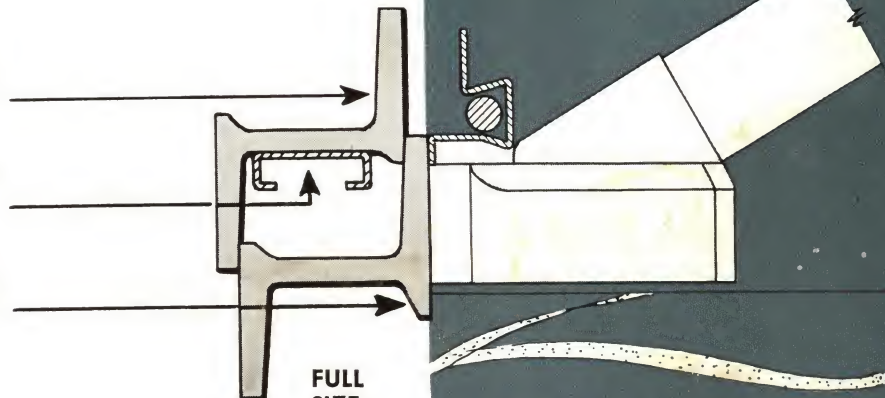
RANCH WINDOW

Types and Sizes
on page 37.

Note extra depth glazing ledge providing additional ventilator stiffness.

Note stainless steel operator guide to avoid corrosion.

Note extra depth lug affording ample room for attachment of roto operator.



FULL
SIZE
DETAIL

Combined weight of frame and vent section is 2.31bs. per linear foot. Depth of each section is 1".

TRUSCON RESIDENTIAL STEEL CASEMENTS — SERIES 5



Fleishman Residence, Strathmore Park, Baltimore, Md.
Fenton & Litchtig, Archt.; Talles Construction Co., Bldr.

Truscon Residential Casements are equipped with Roto Operators which open or close the ventilators without the necessity of moving the screen or storm sash. The ventilators are held securely in any open position. The concealed-latch locking handles provide positive cam action, drawing the ventilators tightly closed and weathertight. Casements are tapped to receive screens and storm sash.

In ventilated units, all glass can be washed from the interior side.

Casements are bonderized as standard practice and given one prime coat of gray Bakelite (phenol-resin) base paint, oven-baked, at Youngstown factory.

SCREENS

Truscon Casement Screens are made especially for these windows and are attached to the inside of the window. They do not interfere with the ventilator opening or closing movement. They may be conveniently and quickly installed or removed. Since it is not necessary to move the screen to operate the casement, there is no interference with curtains, draperies or shades.

STORM SASH

Truscon Storm Sash are made especially for these windows and meet the growing demand for heat conservation in winter months and for all-season service in air conditioned homes. They are glazed with double strength clear glass.

Integral ventilators permitting controlled ventilation may be had when so specified. We recommend that at least one storm sash in each room be equipped with a ventilator.



ROTO OPERATOR

P-4580 — R. H. P-4581 — L. H.
(P-4581 — L. H. shown)

Underscreen type, an exclusive Truscon design, sturdy in construction, attractive in appearance



R.H. L.H.

LOCKING HANDLES

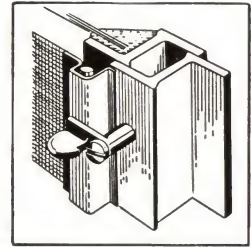
P-3333 — R. H.
P-3334 — L. H.

Standard is die-cast material with bronze lacquer finish



P-4841-S

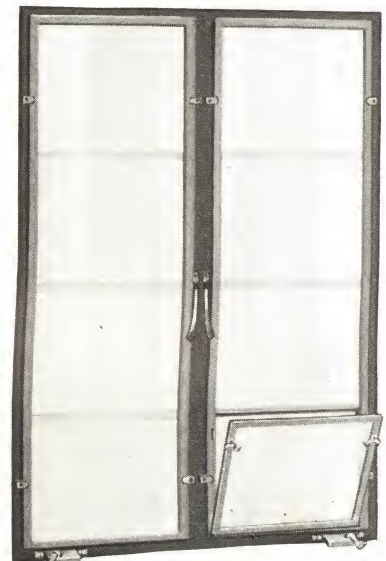
For use with venetian shades. Standard is steel stamping with bronze lacquer finish.



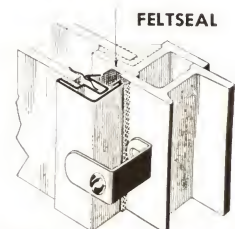
Cam acting screen clip. Two clips used at each side of screen frame.



SCREEN FOR RESIDENTIAL CASEMENT



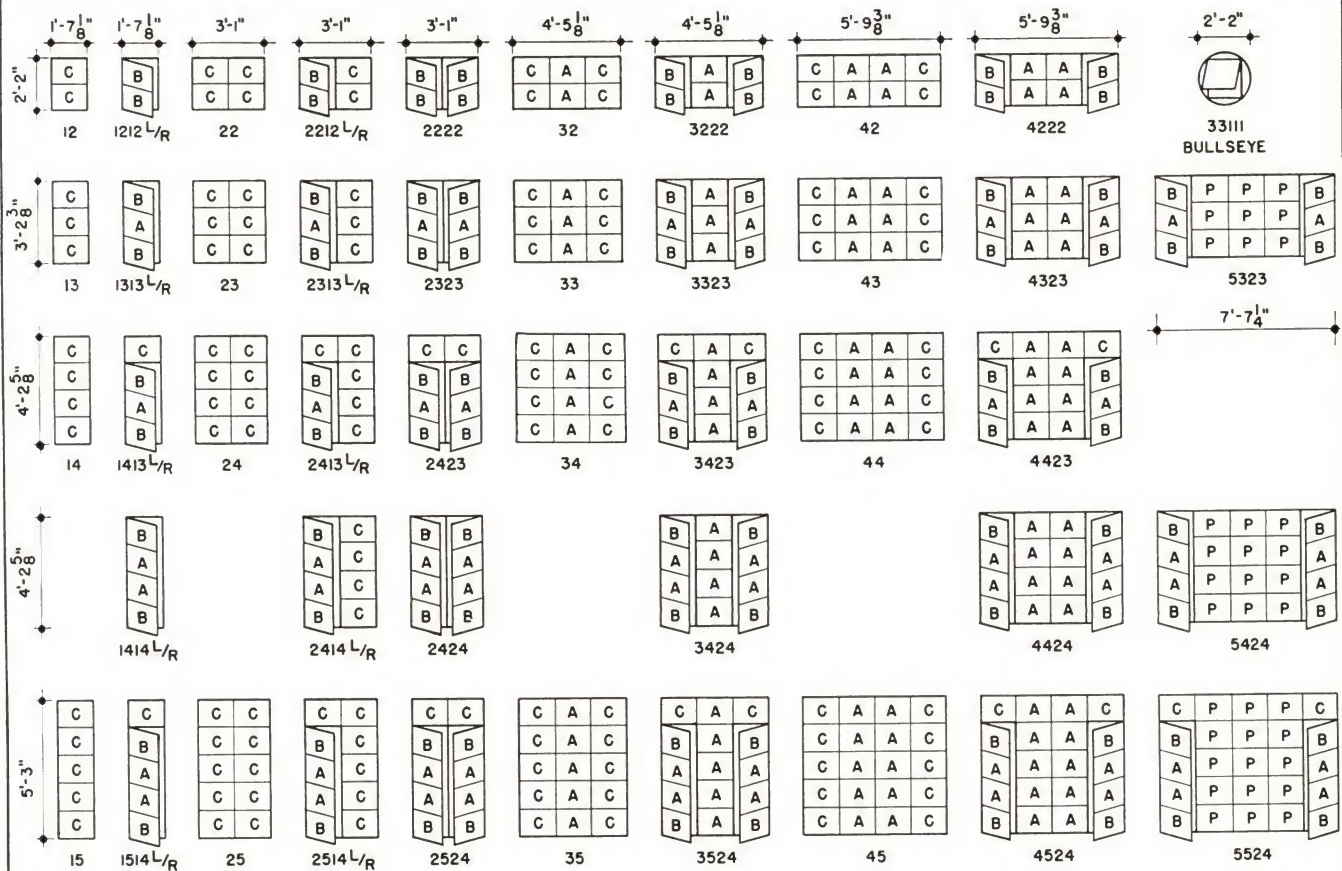
STORM SASH FOR RESIDENTIAL CASEMENT



STORM SASH DETAIL

TRUSCON RESIDENTIAL STEEL CASEMENTS—SERIES 5 TYPES AND SIZES

All types and sizes shown hereon are carried in stock east of the Rocky Mountains. For special Pacific Coast sizes, refer to the Home Office.



PICTURE WINDOW UNITS

OUTSIDE PUTTY GLAZED TYPES FOR
USE WITH SINGLE GLASS

INSIDE GLAZED TYPES FOR USE WITH
STOCK SIZE DOUBLE GLASS

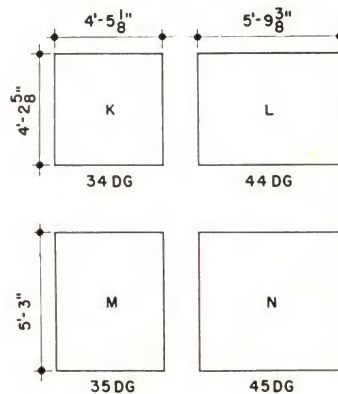
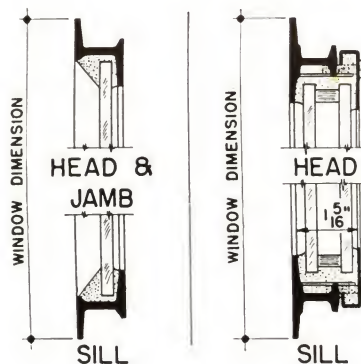
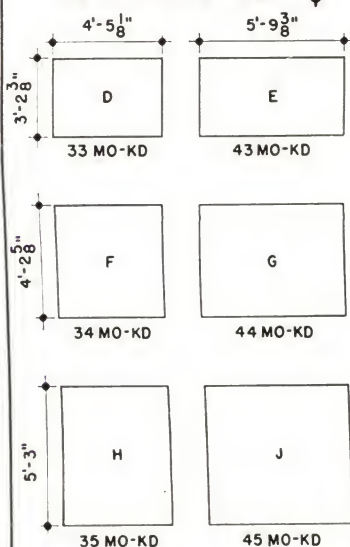


TABLE OF GLASS SIZES

MK	SIZE
A	16" X 12"
B	16" X 11 1/4"
C	17 3/8" X 12"
D	51 1/8" X 36 3/8"
E	67 3/8" X 36 3/8"
F	51 1/8" X 48 5/8"
G	67 3/8" X 48 5/8"
H	51 1/8" X 61"
J	67 3/8" X 61"
K	50 3/8" X 47 3/4"
L	66 3/8" X 47 3/4"
M	50 3/8" X 60 1/8"
N	66 5/8" X 60 1/8"
P	17 3/4" X 12"

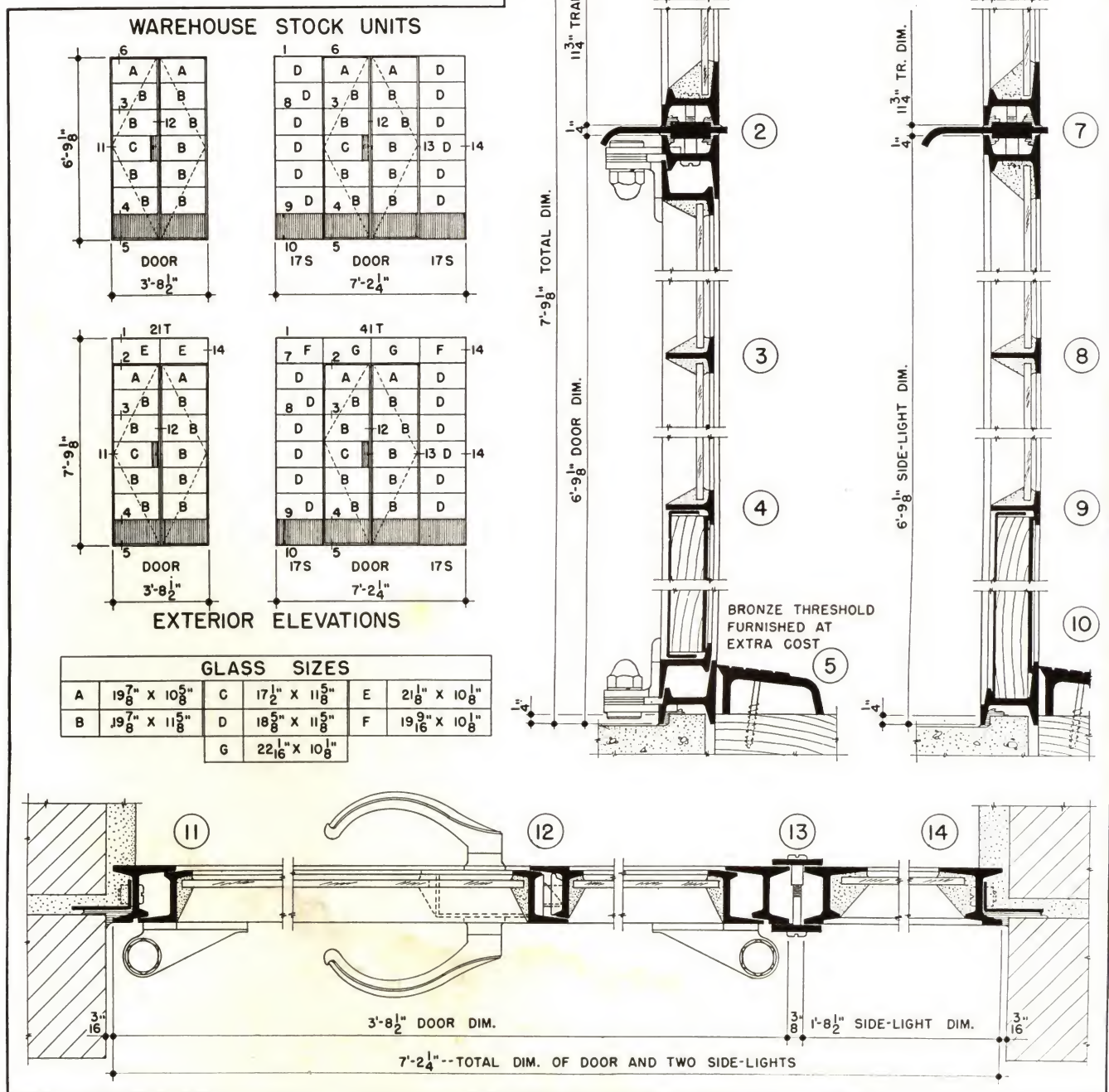
- "KD" PICTURE WINDOW UNITS ARE SHIPPED KNOCKED DOWN FOR FIELD ASSEMBLY.
- DIMENSIONS SHOWN ARE WINDOW DIMENSIONS.
- ELEVATIONS ARE SHOWN AS VIEWED FROM THE OUTSIDE. HAND OF CASEMENTS IS DETERMINED BY LOCATION OF HINGES AS VIEWED FROM THE OUTSIDE.
- FOR STUD OPENING OR ROUGH OPENING SIZES USE WINDOW DIMENSIONS SHOWN AND ADD 1 1/2" IN WIDTH AND 1 1/2" IN HEIGHT.

TRUSCON RESIDENTIAL STEEL CASEMENT DOORS

TYPES AND SIZES—INSTALLATION DETAILS

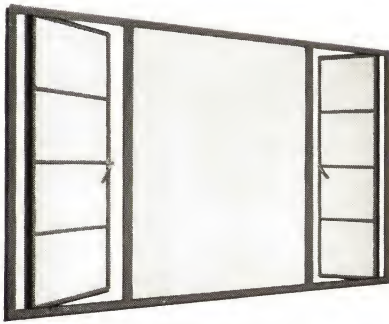
The Truscon Residential Casement Door, transoms and sidelights are made of intermediate casement sections. The door is designed and weathered to open outward only and is equipped with mortise cylinder-lock hardware having solid bronze handles on the active leaf, concealed bronze top and bottom bolts on the inactive leaf, and three friction hinges on each leaf. The lock is operated by key from the outside and by thumb turn from the inside. A bronze threshold for use inside the door is available as an extra. Openings with sidelights and/or transoms are shipped unassembled. Casement Doors are primarily intended for use in conjunction with steel window installations

in residences and apartments. They will be found best suited for openings to porches, sun rooms and in similar locations. This type of door is not considered practical for use as an entrance door. All units shown below are carried in warehouse stocks.

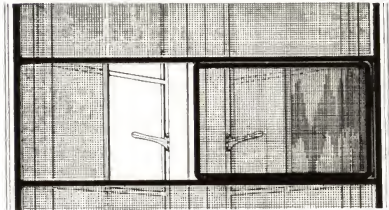


TRUSCON SIMPLEX STEEL CASEMENTS

For Large Housing Projects

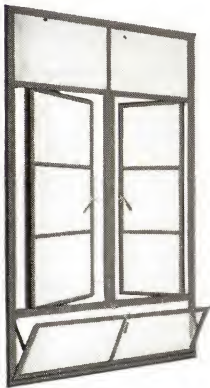


Simplex Casement with
integrally built picture window



WICKET SCREEN

Panel open to give access to locking handle



Simplex Casement
with Sill Ventilator



Solid Bronze
Cam Acting
Locking Handles
P-17235LH
(illustrated above)
P-17234RH

Truscon Simplex Casements are available in the same window opening sizes as listed on preceding pages for the standard Roto design, provided that not less than 300 window units are included in any single order, with an average of not less than 50 units for each different type required.

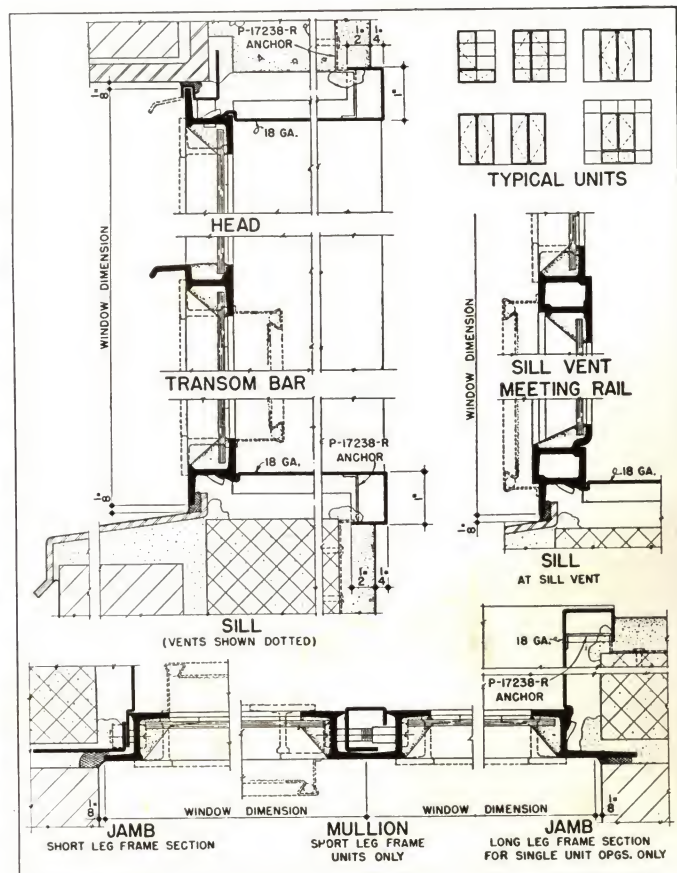
Simplex Casements provide a simple, rugged, trouble-proof installation and are the most economical window for the larger building projects. Constructed of the same sectional shapes and in the same dimensions as standard sill operator types, they differ only in the hardware and screening, being equipped with friction hinges and cam acting handles attached to vents. Screens are sliding wicket type.

In order to more closely fit into the architectural requirements on specially designed multiple residential projects, a number of features not offered with standard Residential Casements are available. Among them are integrally constructed tilt-in sill vents, variations in the ventilator arrangement, long-leg head and jamb members to eliminate attached fins, and steel casings to fit any depth of wall thickness (see details below). Casings eliminate the expense of corner beads, stools, and the plastering of returns at head and jambs. In addition, they minimize maintenance cost arising through the frequent necessity of plaster repairs around window openings on rental housing projects.

Simplex Casements are strongly recommended for consideration on the larger residential projects in any geographical location. A fifteen year record of bids submitted by contractors on numerous public and private projects clearly shows that overall cost per window opening is lower than that obtainable with any other window design. Maintenance costs on this simple window are low.



Knickerbocker Homes, Elmont, L.I., N. Y.
Alex Muss & Lee Schoenfeld, Contr.; Oscar Silverstone, Archt.



TRUSCON STEEL RANCH WINDOWS



Tollgate Project, Owings Mills, Md.
Precision Builder Homes, Inc., Bldrs.



Tollgate Project, Owings Mills, Md.
Precision Builder Homes, Inc., Bldrs.



Truscon Ranch Type Steel Window Installation

Architectural Adaptability — The Ranch Window still further expands Truscon's unmatched line of steel residential window products. Incorporated in this new and attractive design are features particularly suited to one story home construction in the widely popular ranch house style.

Special Features — The Ranch Window in the larger sizes provides an attractive living room picture window which, when viewed from the outside, tends to minimize the "wide open" effect characteristic of a large undivided glass area. The medium size units fit very conveniently into window openings for dining rooms, dens and libraries. In the smaller units, the windows are admirably suited for sleeping rooms where privacy, effective ventilation in inclement weather and maximum utilization of wall space for furniture arrangement are of primary importance.

Sturdy Design and Welded Construction — The window frames are constructed of specially rolled, extra heavy steel sections, one inch in depth. All joints and corners are securely welded to form strong integrally built frames and ventilators — thus permanently guaranteeing avoidance of distortion under any normal usage.

Convenient Ventilation — Ventilators are of the awning type, hinged at the top to swing outward at the bottom. The degree of opening is controlled by two adjustable sliding friction stays, one in each jamb and both completely concealed when the vent is in a closed position. The cam acting locking handle is of solid bronze. Screens, if desired, are of the vertically sliding wicket type.

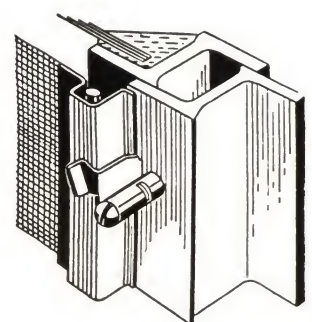
Insulating Glass Available in Standard Sizes — Special attention is called to the availability of standard size Thermopane glass in $\frac{1}{2}$ " thickness for both the fixed (36" x 24") and ventilator (34 $\frac{1}{8}$ " x 22 $\frac{1}{8}$ ") lights. The use of insulating glass in colder areas economically overcomes the storm sash problem.

Available from Warehouse or Factory — Truscon Ranch Windows are available from key warehouse stocks. The proven economies of volume production in standard types are reflected in the selling prices. Factory shipment will be made of units with vents located other than standard provided that no two vents are positioned vertically adjacent to each other in the same unit.



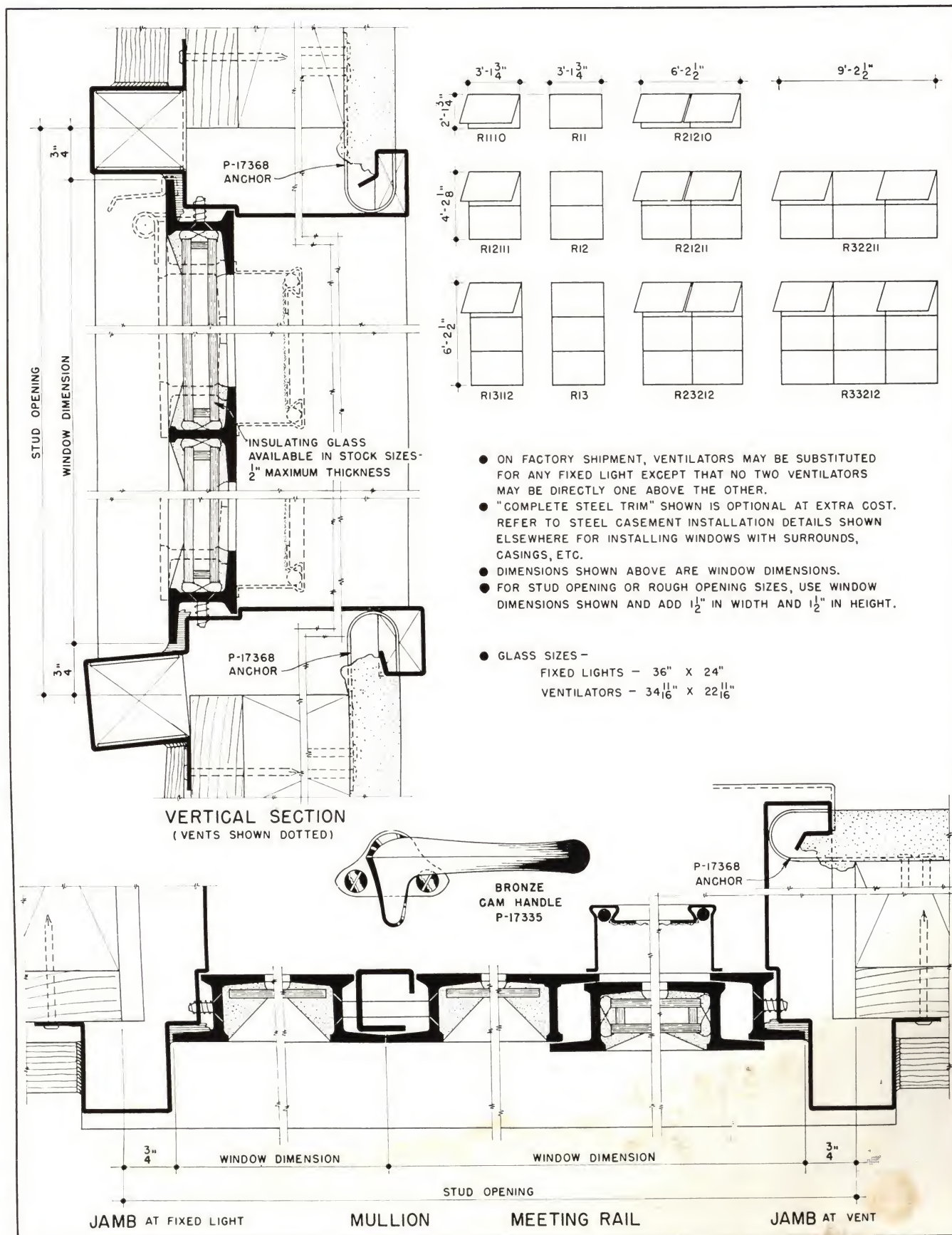
← Truscon's specially designed, close-fitting insect screen with its vertically sliding wicket permits convenient access to the solid bronze locking handle to open or close the ventilator. Effective screening and adequate ventilation in either fair or inclement weather is assured at all times.

→ Note that the screen is installed on the interior side of the glass, eliminating deterioration from weather and providing uniform outside appearance of glass area. Four swinging clips permit simple removal of the screen for window washing or winter storage. Screen cloth is bronze.

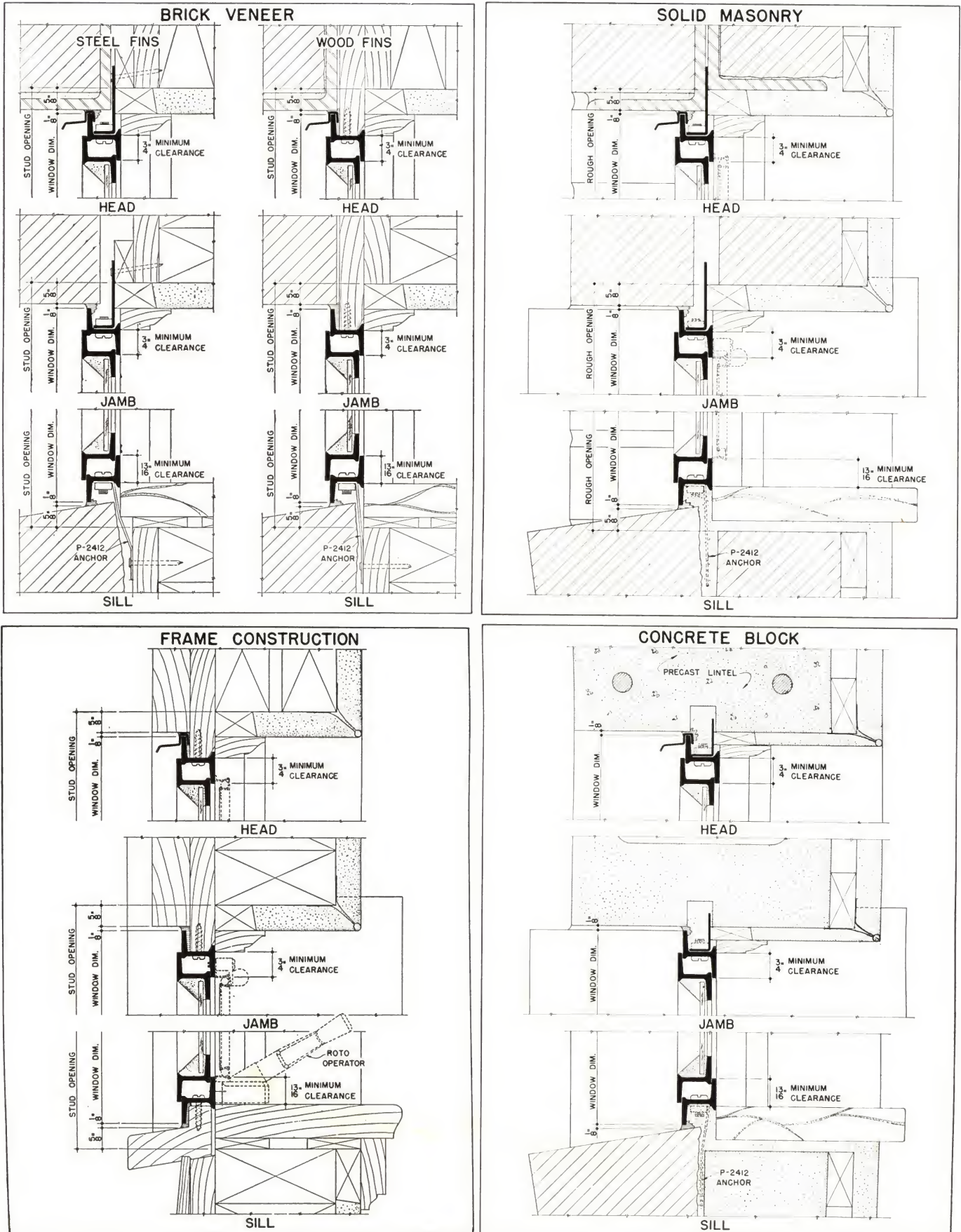


TRUSCON STEEL RANCH WINDOWS

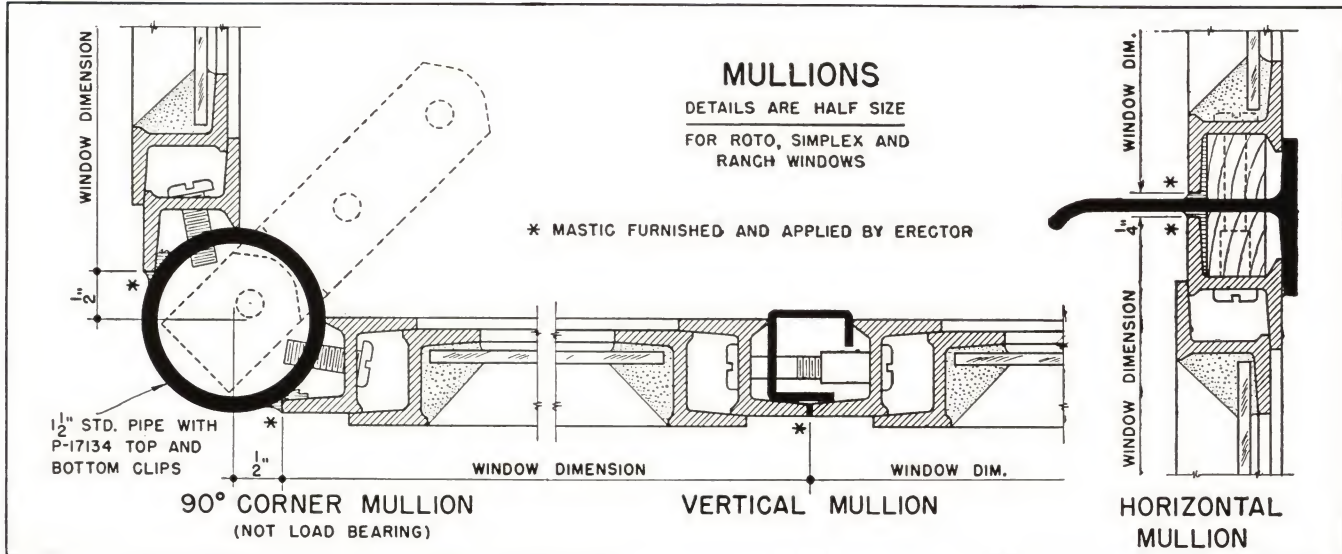
TYPES AND SIZES CARRIED IN WAREHOUSE STOCK



TRUSCON RESIDENTIAL STEEL CASEMENTS—SERIES 5 **INSTALLATION DETAILS (Additional Details Shown on Pages 40, 43 and 45)**



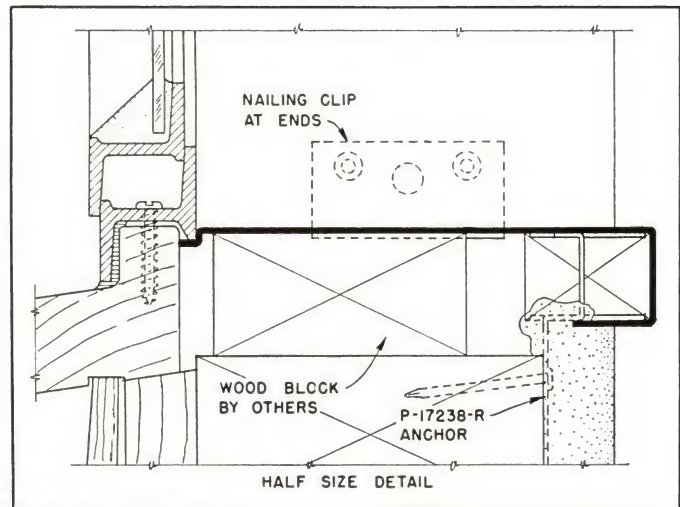
TRUSCON MULLIONS AND STEEL STOOLS



STEEL STOOLS

Truscon STEEL STOOLS, of varying depths and as shown in the detail at right, are available for shipment from factory provided that not less than 300 stools are included in any single order.

Stools are fabricated from 16 gauge steel sheets and are furnished with end fillers, anchors and nailer clips. Underblocking is recommended to assure a firm base. The finish consists of Truscon's standard bonderizing and baked-on coat of gray paint. Cost of stools is relatively low, installation is simple and maintenance negligible.



Ventilators swing wide to provide maximum ventilation



Washington Street Apartments
Brookline, Mass.
Bell & Roberts, Bldrs.

TRUSCON COMPLETE STEEL TRIM

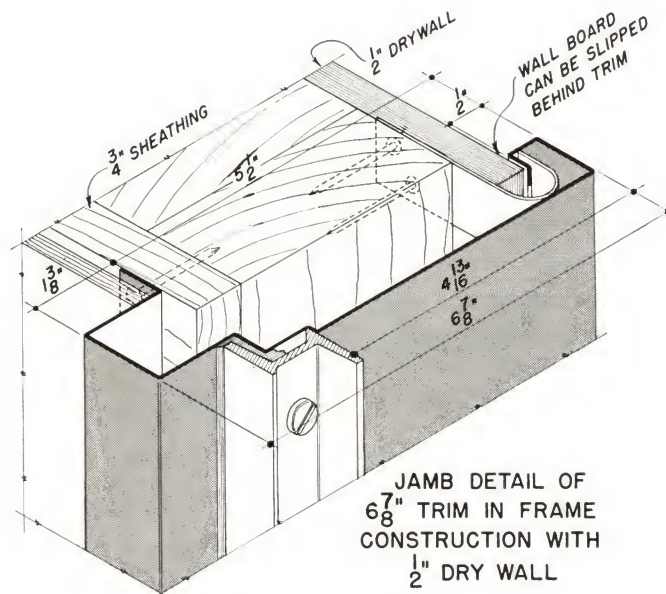
FOR USE WITH TRUSCON RESIDENTIAL STEEL CASEMENTS

Truscon's combined inside casing and outside trim is designed for use with all types of Residential Casement units including Roto, Simplex and Ranch Windows. The Complete Steel Trim eliminates the cost and labor of fitting all exterior or interior trim, stools, sills and corner beads, as well as the plastering or other finish on the interior reveals. The design forms a mould against which the siding, brick, stucco, plaster or other wall material may finish. The broad exterior lines lend depth and character to the window openings, while the interior surfaces afford a smooth, even face with ample depth for attachments of curtains and shades.

The Truscon design permits wall board to be inserted behind the trim as shown in the illustration. This eliminates the more costly method of butting the wall board to the trim.

The opening widths of the popular two, three and four light wide units work in closely with standard 16" modular masonry units, thus permitting the masonry walls to be laid up around window openings with full and half blocks with a minimum of labor. Overall installation costs will be found well below those of conventional wood trim and plaster construction.

Formed from steel sheet, 16 gauge at sill and 18 gauge at head and jambs, and finished with Truscon's standard bonderizing and baked-on paint, frames of Complete Steel Trim are available from warehouse stock in depths of either 6 $\frac{5}{8}$ " or 6 $\frac{7}{8}$ " (at jambs). These depths will be found suitable for practically all types of residential wall construction, whether of brick veneer, frame, concrete block or solid masonry and with either plaster or dry wall interior finish. (See details on opposite page.) Complete Trim is also available in electro-galvanized steel at a slight extra cost, from factory only and in minimum lots of 300 units.



JAMB DETAIL OF
6 $\frac{7}{8}$ " TRIM IN FRAME
CONSTRUCTION WITH
1/2" DRY WALL

Complete Trim is shipped knocked down and is designed with a concealed mortise and tenon corner assembly. The trim unit is attached to the casement with self-tapping screws and an integrally rolled fin provides firm anchorage in the wall structure whether of wood or masonry construction. A buttered-on mastic seal between casement and trim is recommended for best results.

Two depths are carried in stock, 6 $\frac{5}{8}$ " and 6 $\frac{7}{8}$ ", for use in following types of wall construction:

1/2" sheathing, 3 5/8" studs, and 1/2" wall board	— 6 5/8"
1/2" sheathing, 3 5/8" studs, and 3/8" wall board	— 6 5/8"
1/2" sheathing, 3 5/8" studs, and 3/4" plaster	— 6 5/8"
3/4" sheathing, 3 5/8" studs, and 1/2" wall board	— 6 7/8"
3/4" sheathing, 3 5/8" studs, and 3/8" wall board	— 6 7/8"
3/4" sheathing, 3 5/8" studs, and 3/4" plaster	— 6 7/8"
Brick with 3/4" furring and 3/4" plaster	— 6 5/8"
Brick with 3/4" furring and 1/2" wall board	— 6 7/8"
Concrete block with 3/4" furring and 3/4" plaster	— 6 5/8"

SPECIFICATIONS

1. Specify — Complete Trim for Residential Casements as manufactured by the Truscon Steel Division, Republic Steel Corporation, Youngstown, Ohio.

2. Material — Complete Trim frames shall consist of 18 gauge head and jamb members and 16 gauge sill members. Trim shall have a nominal depth of either 6 $\frac{5}{8}$ " or 6 $\frac{7}{8}$ " (at jambs) and be designed to provide a complete interior and exterior metal trim around the entire window opening.

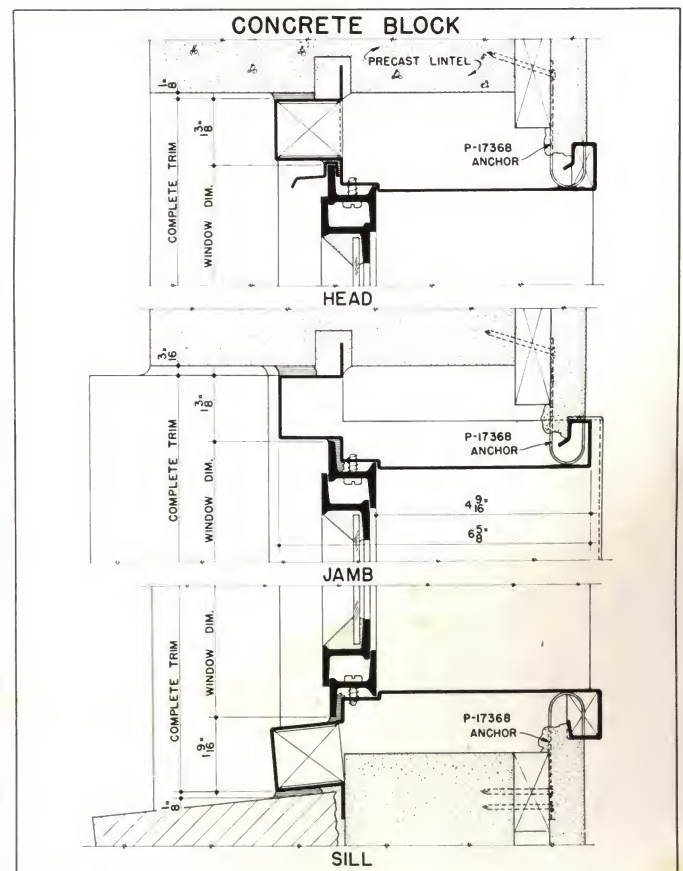
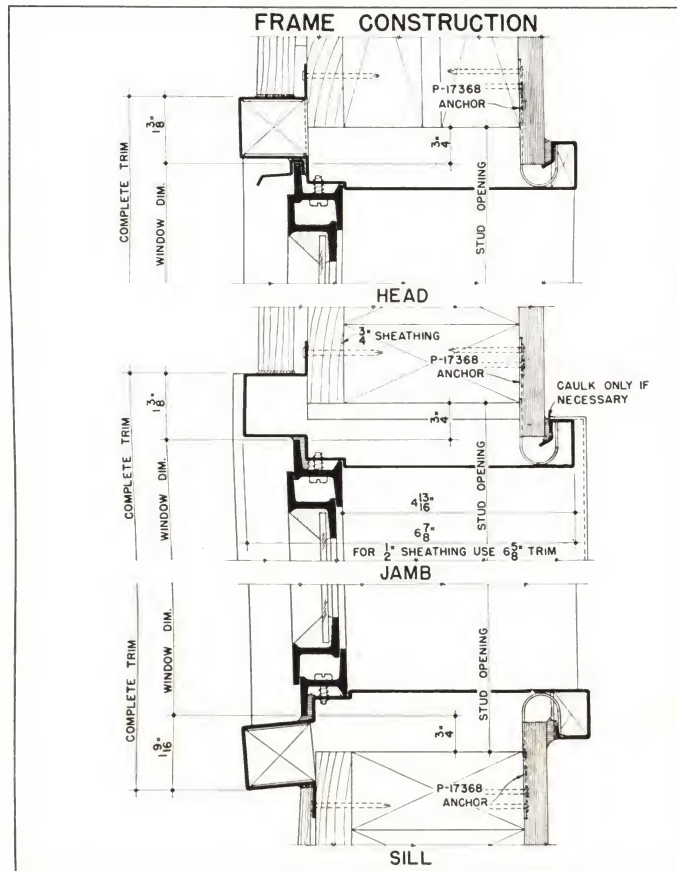
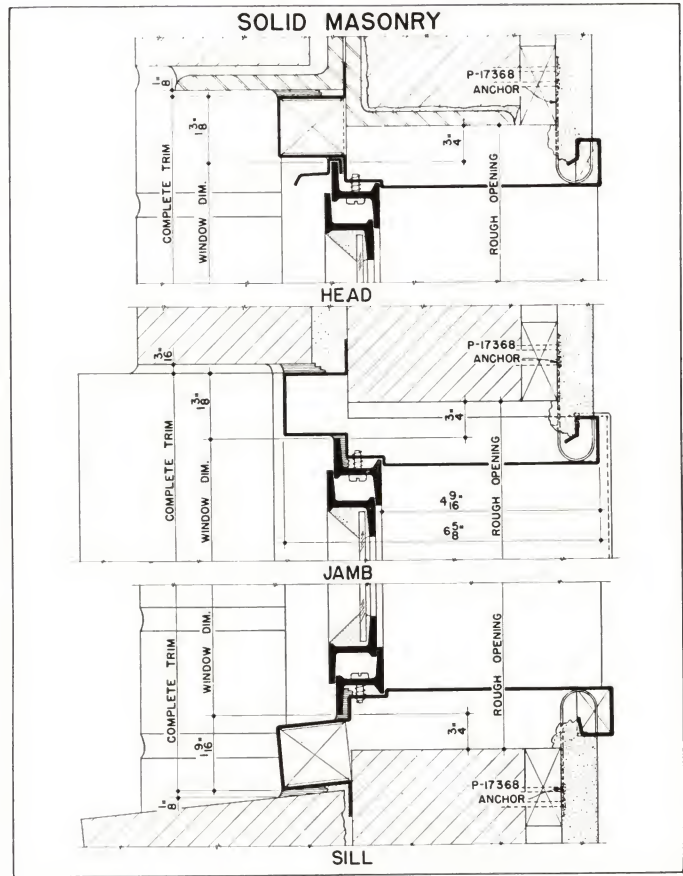
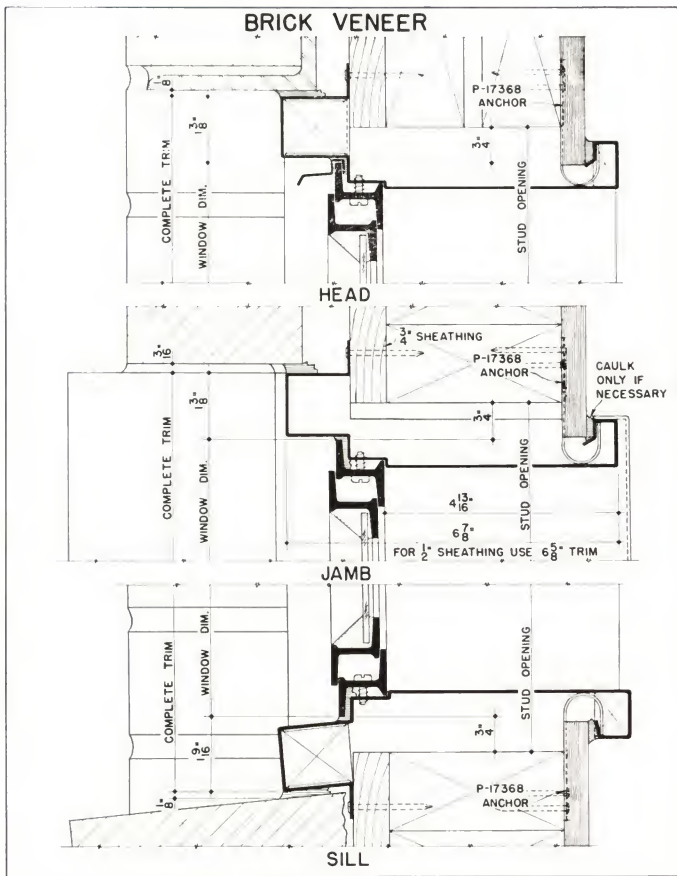
3. Construction — All members shall be accurately formed to shape with corners fitted to a hairline crack and provided with a mortise and tenon system of assembly. On the inside, the trim shall provide a flat surface for the full depth of the reveal and a flat 1" wide trim line turned at the outer edge. On the outside, the trim shall present a square mould, shall provide an integrally formed continuous fin approximately

3/4" deep and be punched for nailing to frame construction. The sill shall be sloped to provide a wash to the outside. Ends of head and sill members shall be closed on both the inside and outside. Complete Trim shall be designed for shipment knocked down.

4. Shop Finish — Complete Trim shall be bonderized and given a dip coat of gray Bakelite paint, oven-baked one hour at 300 degrees Fahrenheit.

5. Assembly and Erection — Complete Trim shall be securely attached to the casements with self-tapping screws. Joints between the trim and casements shall be buttered with mastic furnished by the erector. The assemblies shall be accurately fitted, squared, the tenon ends of trim clinched and shall present a neat and workmanlike finish when set in the walls. Standard anchors shall be provided to firmly support the trim at the inside face.

TRUSCON COMPLETE STEEL TRIM INSTALLATION DETAILS



TRUSCON STEEL CASINGS

FOR USE WITH TRUSCON RESIDENTIAL STEEL CASEMENTS

Truscon STEEL CASINGS are available in depths of $4\frac{1}{2}$ " and $5\frac{1}{4}$ " for use with any standard size Roto Casement and several width combinations thereof (see page 33 for sizes and table below for combinations). Casings may also be used with Simplex Casements and Ranch Windows, and in conjunction with steel surrounds, but they are available only on factory shipment and may be of any depth. The casings are formed from 18 gauge steel material, bonderized and painted with a baked-on Bakelite base primer.

The two depths, $4\frac{1}{2}$ " and $5\frac{1}{4}$ ", will be found to most effectively answer practically all types of residential construction. The $4\frac{1}{2}$ " depth is appropriate for use in frame building construction and, when used in conjunction with steel surrounds, in practically any type of residential construction. The $5\frac{1}{4}$ " depth is suitable for use with brick veneer, solid masonry or concrete block wall construction. From details on the opposite page, it will be noted that the shape of the $5\frac{1}{4}$ " casing also provides a continuous anchorage and weathering fin at head and jambs, thereby

eliminating the necessity of attaching separate fins. On large projects this reduces field labor substantially.

The overall economy resulting from the use of casings arises through the elimination of the cost of furnishing and attaching corner beads and window stools, as well as plastering of the window reveals at jambs and head. In addition, maintenance costs are reduced by the avoidance of plaster repairs, particularly on rental projects.

Casings are formed accurately to size and are shipped "knocked-down". They are designed with a concealed mortise and tenon system of assembly at the corners. The casing unit is then fastened direct to the casement. When the assembly also includes surrounds, the casing is held in place by a nut applied to the screws used to attach the surround. The junction between casement and casing is weather-tight and entirely concealed. The entire assembly is securely fastened in place and built in with the progress of the wall construction.

TYPES AVAILABLE FOR ROTO CASEMENTS

Lights High	LIGHTS WIDE									
	Single Unit Openings				One Mullion Opps.		Two Mullion Openings			
	1 Lt.	2 Lts.	3 Lts.	4 Lts.	4 Lts.	6 Lts.	4 Lts.	5 Lts.	6 Lts.	6 Lts.
2	* 12	* 22	* 32	* 42	22 — 2	33 — 2	* 121 — 2	* 131 — 2	* 141 — 2	222 — 2
3	* 13	* 23	* 33	* 43	22 — 3	33 — 3	* 121 — 3	* 131 — 3	* 141 — 3	222 — 3
4	* 14	* 24	* 34	* 44	22 — 4	33 — 4	* 121 — 4	* 131 — 4	* 141 — 4	222 — 4
5	* 15	* 25	* 35	* 45	22 — 5	33 — 5	* 121 — 5	* 131 — 5	* 141 — 5	222 — 5

* Indicates units carried in warehouse stocks.

The casing numbers shown above correspond to the casement units with which they are to be used, i.e., a 34 casing fits a type 34, 3423 or 3424 casement.

SPECIFICATIONS

- Specify** — Steel Casings as manufactured by the Truscon Steel Division, Republic Steel Corporation, Youngstown, Ohio.
- Material** — Casings shall consist of head, jambs and sill members, fabricated from 18 gauge steel material.
- Construction** — Casings shall provide a flat surface for the full depth of the reveal, a flat 1" wide interior trim line turned at the outer edge, and shall finish flush with the plaster. Depth of standard casings shall be $4\frac{1}{2}$ " or $5\frac{1}{4}$ ", and the latter shall be so formed as to effect a continuous weather and anchorage fin at head and jambs.

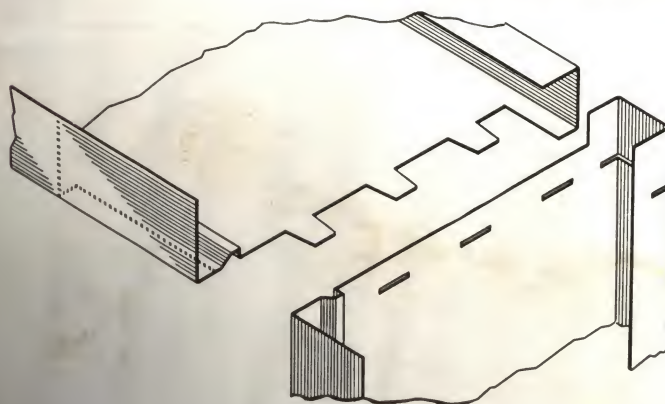
Corners shall be fitted to a hairline crack and shall be provided for a mortise and tenon system of assembly, so designed that the

junction between casement and casing is weather-tight and entirely concealed.

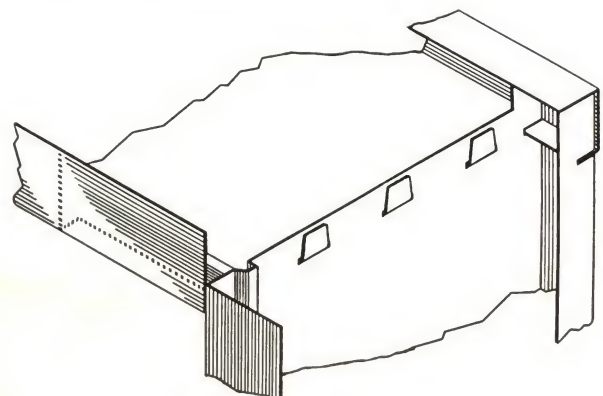
- Shop Painting** — Casings shall be bonderized and given a dip coat of gray Bakelite paint, oven-baked one hour at 300 degrees Fahrenheit.

- Assembly and Erection** — Casing shall be securely attached to the casements (and surrounds). Joints between casement and casing shall be buttered with mastic furnished by the erector. The assemblies shall be accurately fitted, squared, the tenon ends of casings clinched, and present a neat and workmanlike finish when set in the walls. Provide standard anchors to firmly support the casings at the inside face.

CASING MEMBERS AT UPPER RIGHT-HAND CORNER



Before Assembly

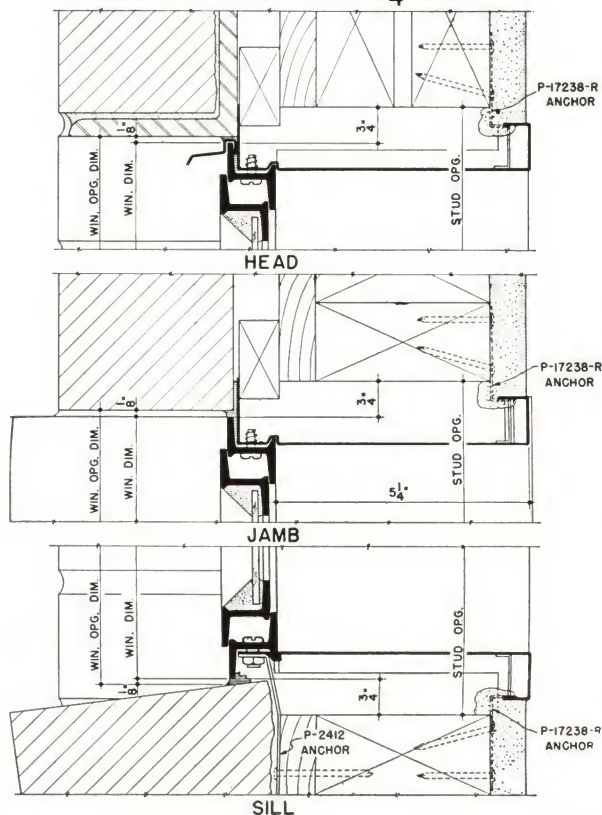


After Assembly

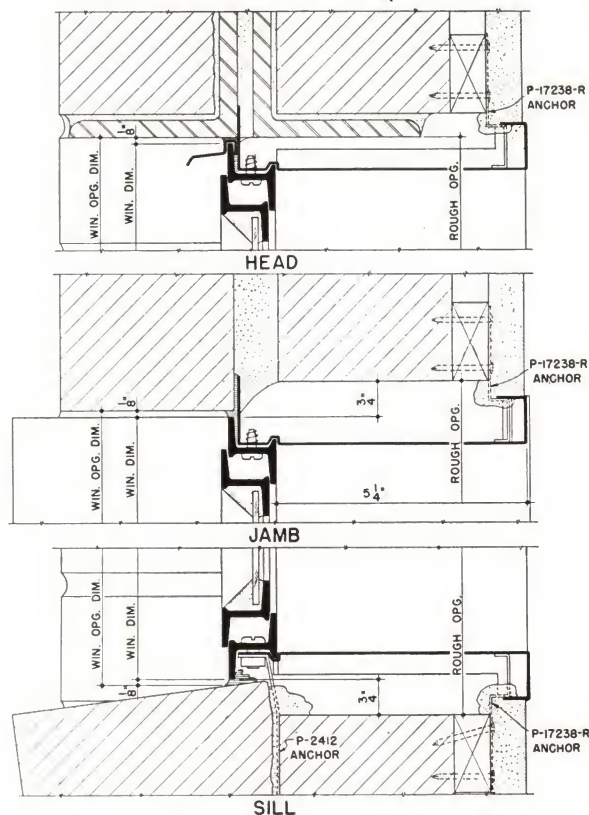
TRUSCON STEEL CASINGS — FOR TRUSCON RESIDENTIAL STEEL CASEMENTS

STEEL CASINGS—INSTALLATION DETAILS

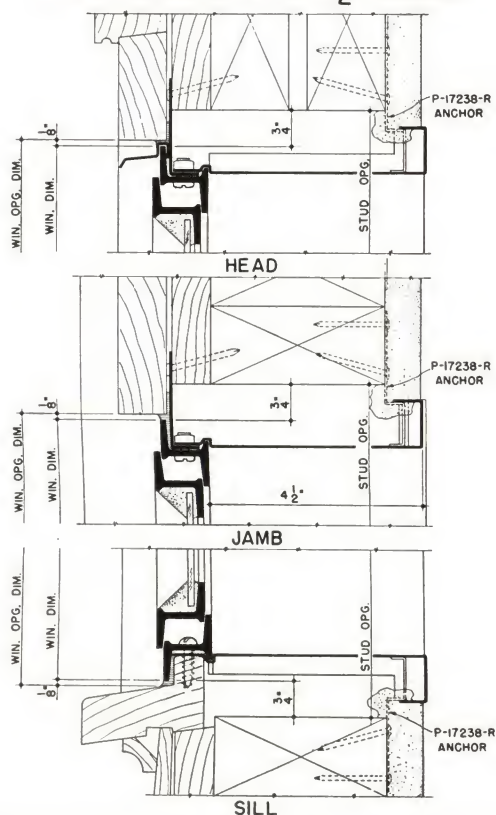
BRICK VENEER WITH 5/4" CASING



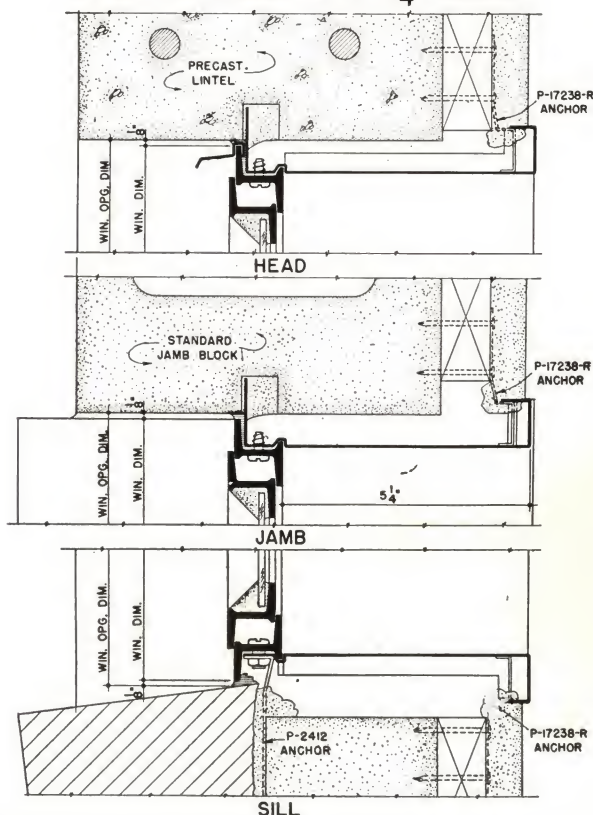
SOLID MASONRY WITH 5/4" CASING



FRAME CONSTR. WITH 4 1/2" CASING



CONCRETE BLOCK WITH 5/4" CASING



TRUSCON FORMED STEEL SURROUNDS

FOR USE WITH TRUSCON RESIDENTIAL STEEL CASEMENTS

Truscon formed STEEL SURROUNDS are used with Roto Casements when a moulded frame effect is desired. In addition, the Steel Surround eliminates the use of wood trim when the exterior wall construction is of wood siding or shingles. The members are formed to pleasing contours designed to lend depth and character to the window appearance, while at the same time facilitating installation and anchorage. Steel surrounds are made of 18 gauge electro-galvanized steel and are bonderized and shop painted with a high quality baked-on primer. They may also be used with Simplex Casements and Ranch Windows but are available on factory shipment only.

Of particular interest to builders in concrete block or similar standard masonry units are the resultant modular dimensional opening widths when steel surrounds are used with the popular two, three and four light wide casements. The width dimensions of 3'-4", 4'-8 $\frac{1}{8}$ " and 6'-0 $\frac{3}{8}$ " work in closely with standard 16" modular masonry units, thus permitting the masonry walls to be laid up around window openings with full blocks and half-blocks with a minimum of labor.

Truscon formed steel surrounds are designed for shipment knocked down, permitting assembly and attachment in warehouse or at job site. The corners are accurately coped to present neat joints and the surround members are conveniently bolted to the casement. The use of mastic to effectively seal the joint between window frame members and surround provides a weathertight barrier around the entire perimeter of the window assembly. An integrally rolled fin affords firm anchorage in the window opening, whether of wood frame, brick veneer or solid masonry construction.

SPECIFICATIONS

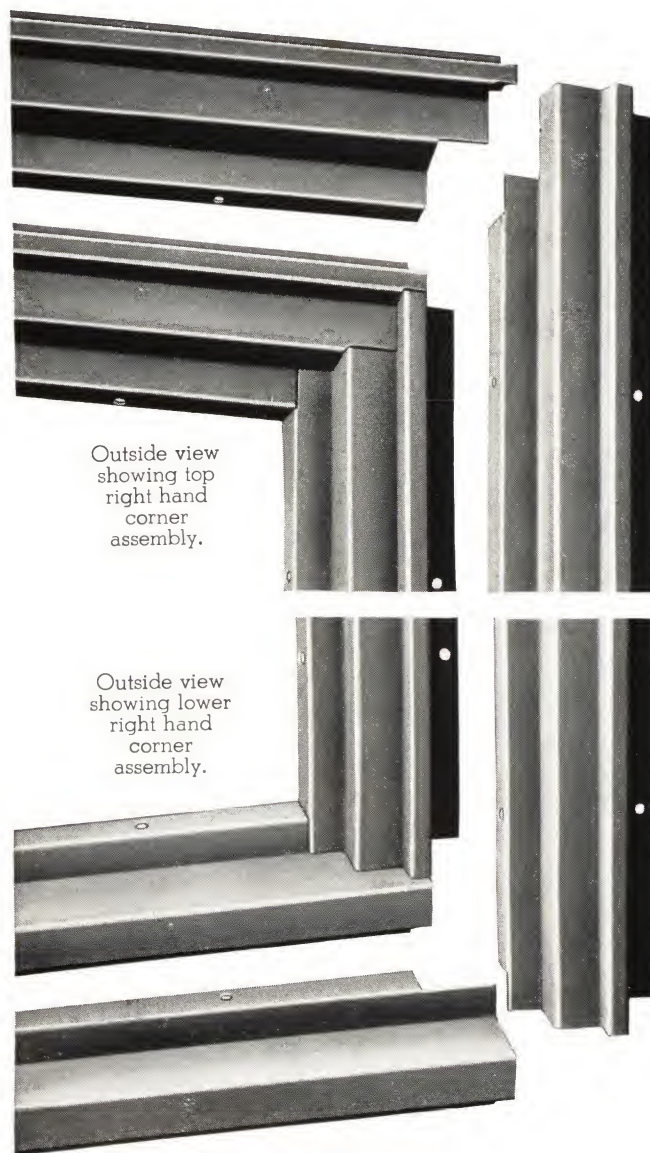
1. Specify — Formed Steel Surrounds for Residential Casements as manufactured by the Truscon Steel Division, Republic Steel Corporation, Youngstown, Ohio.

2. Material — Surrounds shall consist of head, jams and sill members, fabricated from 18 gauge electro-galvanized steel sheets.

3. Construction — Surrounds shall be designed for shipment knocked down and field attachment to casements with bolts. All members shall be accurately cold formed to shape. Head and jamb members shall have a moulded reveal approximately 1" deep and 1 $\frac{1}{2}$ " wide and the sill member shall be box shaped and of such form as to provide a wash to the outside. Connections with the rough window opening shall be effected by means of an integrally rolled continuous fin, approximately $\frac{3}{4}$ " deep and punched for nailing to frame construction. Where vertical mullions occur in openings up to six lights in width, the head and sill members shall extend continuously from jamb to jamb without joints or splices. Surround members shall have ends accurately coped and cut to present neat corners and joints in the completed assembly. Ends of the sill member shall be closed.

4. Shop Painting — All surrounds shall be bonderized and given a dip coat of gray Bakelite paint, oven-baked one hour at 300 degrees Fahrenheit.

5. Assembly — Prior to attachment of surround members to casements, sufficient mastic cement shall be applied the full length of each joint to provide a weathertight seal between surround and casement. Attachment shall be securely effected by bolting and the excess mastic removed. Corner joints of surrounds shall be carefully fitted and the entire assembly shall present a neat and workmanlike finish.



Outside view showing top right hand corner assembly.

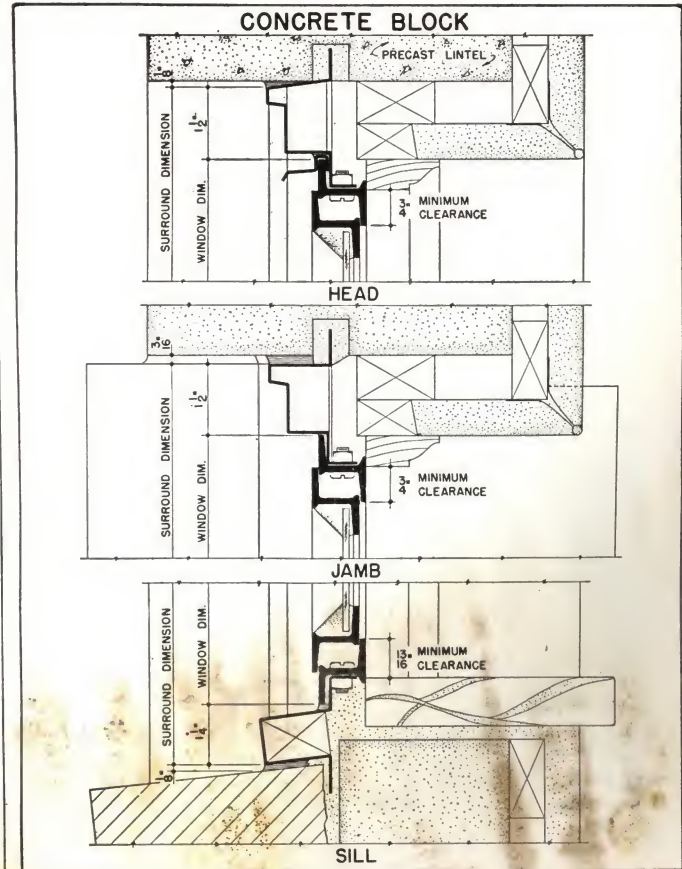
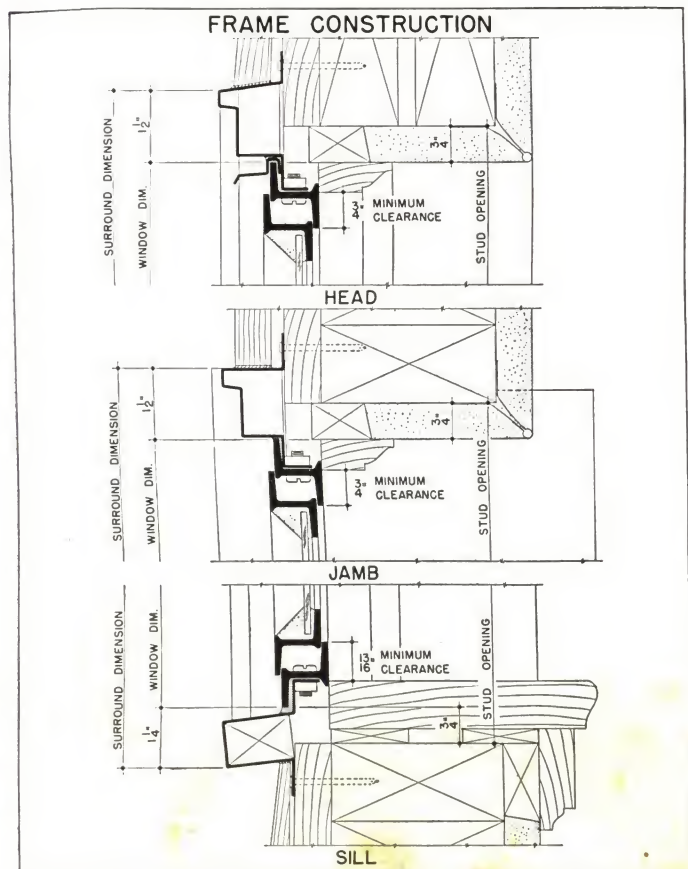
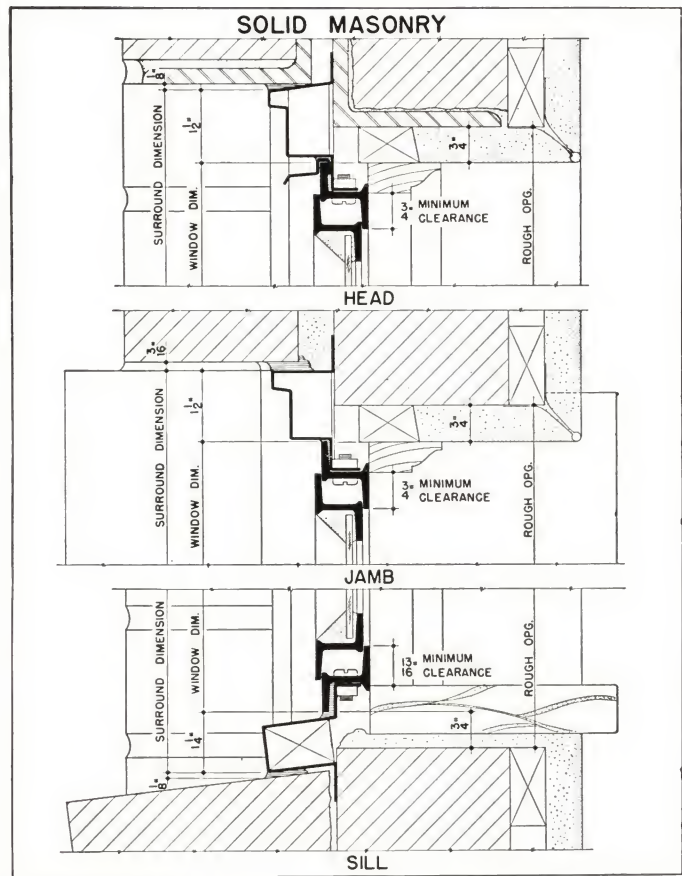
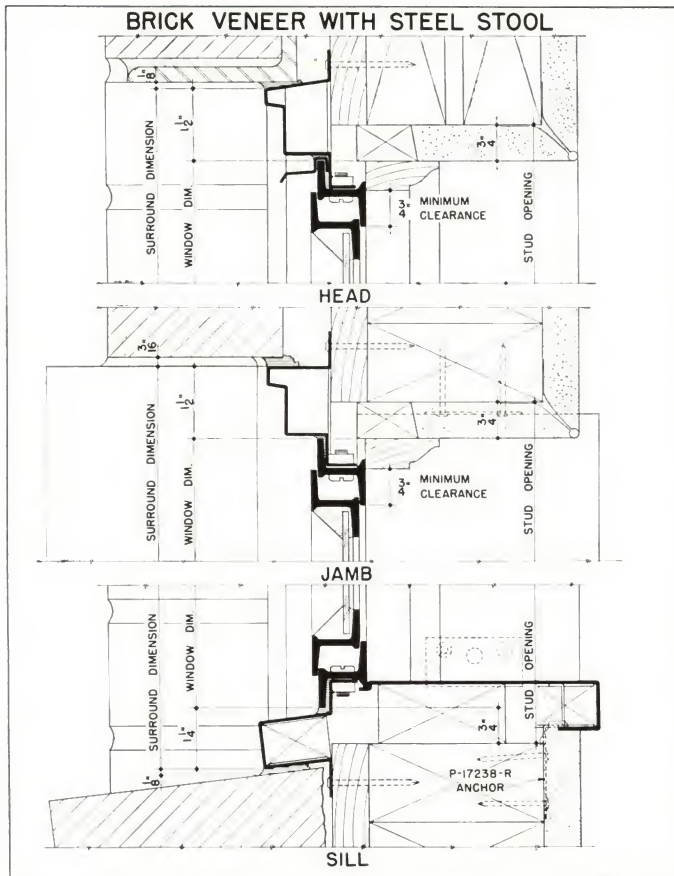
Outside view showing lower right hand corner assembly.

TYPES AND SIZES

Heights	Widths			
2'-4 $\frac{3}{4}$ " 3'-5 $\frac{1}{8}$ " 4'-5 $\frac{3}{8}$ " 5'-5 $\frac{3}{4}$ "	Single Unit Openings			
	1'-10 $\frac{1}{8}$ " * 1 — 2	3'-4" * 2 — 2	4'-8 $\frac{1}{8}$ " * 3 — 2	6'-0 $\frac{3}{8}$ " * 4 — 2
	* 1 — 3	* 2 — 3	* 3 — 3	* 4 — 3
	* 1 — 4	* 2 — 4	* 3 — 4	* 4 — 4
	* 1 — 5	* 2 — 5	* 3 — 5	* 4 — 5
2'-4 $\frac{3}{4}$ " 3'-5 $\frac{1}{8}$ " 4'-5 $\frac{3}{8}$ " 5'-5 $\frac{3}{4}$ "	One Mullion Openings			
	6'-5" 22 — 2	9'-1 $\frac{1}{4}$ " 33 — 2		
	22 — 3	33 — 3		
	22 — 4	33 — 4		
	22 — 5	33 — 5		
2'-4 $\frac{3}{4}$ " 3'-5 $\frac{1}{8}$ " 4'-5 $\frac{3}{8}$ " 5'-5 $\frac{3}{4}$ "	Two Mullion Openings			
	6'-6 $\frac{1}{4}$ " * 121 — 2	7'-10 $\frac{3}{8}$ " * 131 — 2	9'-2 $\frac{5}{8}$ " * 141 — 2	9'-6" 222 — 2
	* 121 — 3	* 131 — 3	* 141 — 3	222 — 3
	* 121 — 4	* 131 — 4	* 141 — 4	222 — 4
	* 121 — 5	* 131 — 5	* 141 — 5	222 — 5

* Warehouse stock types.
Surround dimensions shown — see details.

TRUSCON FORMED STEEL SURROUNDS INSTALLATION DETAILS



TRUSCON RESIDENTIAL STEEL CASEMENTS — SERIES 5

SPECIFICATIONS

1. Specify — Residential Steel Casements as manufactured by Truscon Steel Division, Republic Steel Corporation, Youngstown, Ohio.

2. Material — All members shall be low carbon, new billet hot rolled steel. Frame, ventilator and meeting rail sections shall be not less than 1" in depth nor $\frac{1}{8}$ " in thickness. Muntins shall be $\frac{7}{8}$ " x $\frac{5}{8}$ " tee bars.

3. Construction — Windows shall be constructed for exterior putty glazing. Corners of frames and vents shall be mitered and electrically butt welded with exposed surfaces ground smooth. Muntins shall be attached to frame or vent members by means of mortise and tenon joints and air hammer riveted. Muntin intersections shall be of interlocking design with flush interior surfaces.

Provide head drips over casement vents. Where necessary, vertical mullions and masonry fins (or long-leg frame section for Simplex Casements) shall be furnished. Mullions shall be a formed channel section and shall tightly connect adjoining window units.

Roto Casements shall be tapped to receive screens and storm sash, and Ranch Windows to receive screens.

4. Roto Casement Vents — Shall be side hinged to open out and shall be hung on two extension free-swinging hinges. The hinges shall be blanked from $\frac{3}{16}$ " thick steel plates and shall be welded to frame and vent members. Hinges shall have bronze to steel contact surfaces throughout. Hinge pins to be steel, rust-proofed. Double, full contact weathering shall be provided between vents and frames around the entire perimeter of each vent.

Each vent shall be equipped with a locking handle and sill operator, both having a bronze lacquer finish, and designed to control the vents independently of the screens. The sill operator shall be the worm drive Roto type with stainless steel arm guide. Locking handle shall engage with a concealed keeper attached to vent and shall have cam action. (Locking handles and operators are packed and shipped loose to prevent damage.) Removable stool gauges shall be shipped fastened to operator attachment holes to determine proper height of stool tops for clearance of sill operators.

5. Simplex Casement Vents — Shall be side hinged to open out and shall be hung on two friction type extension hinges. The hinges shall be blanked from $\frac{3}{16}$ " thick steel plates and shall be welded to frame and vent members. They shall have bronze to steel contact surfaces throughout with rust-proofed steel hinge pins and shall be adjustable for friction or wear so as to hold the vent firmly open at any desired angle. Vents shall be equipped with a solid bronze cam acting locking handle. Handles shall be designed for secure attachment to ventilators and shall effect tight closure of vents when locked.

6. Sill Vents — Shall be hinged at bottom to tilt in at top and the framing members shall be integral with entire window unit in which the sill vent is hung. Provide two substantial steel butt hinges with $\frac{3}{8}$ " brass hinge pins, located approximately 4" from vent corners. Concealed, adjustable friction side arms shall be installed at sides of ventilator, holding vent firmly in open posi-

tions. Provide a solid bronze cam acting locking handle for each vent. Design, finish and attachment of the handle shall match that furnished for Simplex Casement Vents, and shall tightly close the vents when locked.

7. Ranch Window Vents — Shall be top hinged to swing out and shall be hung on two substantial steel butt hinges with $\frac{3}{16}$ " brass hinge-pins. Hardware shall include a solid bronze cam acting locking handle and a concealed sliding type, adjustable friction stay at each jamb. Vents shall bed snugly around their entire perimeter.

8. Screens — Frame members shall be of steel, cold formed to channel shape. The splines shall be of No. 5 steel wire rods and the screen cloth of bronze or galvanized steel woven to 18 x 14 mesh.

Frame section shall be made from one continuous piece with corners mitered and folded and the joint welded. Edges over which the screen cloth is turned shall be well rounded. The screen cloth shall be secured to the frames and held taut by the wedging action between spline and frame. Frames and splines shall be bonderized and given one shop coat of gray Bakelite enamel, oven-baked.

Screens shall effectively bar passage of insects to interior of building through the window ventilator, shall fit closely and neatly around the entire perimeter of the ventilators, and shall be rewirable, easily removable, and interchangeable for ventilators of the same size and type. Furnish and provide for all necessary hardware — clips, bolts, screws — for a secure and insect-proof attachment to window.

Roto Casement Vents shall have a separate fixed type furnished for each vent. The screens shall be attached to the inside of the window and shall permit access to the locking handle and operator without removal or opening of the screen.

Simplex Casement Vents shall have wicket type screens providing a horizontal sliding screen panel for access to the casement locking handles and so designed as to afford ample arm room for operating the casement vent and permit closing of the wicket when ventilator is shut. Screens shall be attached to the inside of the windows. Sill Vents shall have a fixed screen attached to the outside of the window but removable from the inside.

Ranch House Windows shall have vents equipped with wicket type screens providing a vertical sliding screen panel for access to the locking handles and so designed as to afford ample arm room for operating the vent and permit closing of the wicket when ventilator is shut. Screens shall be attached to the inside face of the windows.

9. Complete Trim, Casings and Surrounds — Refer to pages 40, 42 and 44, respectively, for specifications.

10. Shop Finish — Windows shall be bonderized and finished with a dip coat of gray Bakelite paint, oven-baked for one hour at 300 degrees Fahrenheit.

11. Erection — Windows shall be set plumb and true in openings and all vents shall be carefully adjusted to insure proper alignment of vent and continuous weathering contacts before glazing. Contacts between windows and adjacent steel, including mullions, shall be sealed with mastic furnished and applied by the erector.

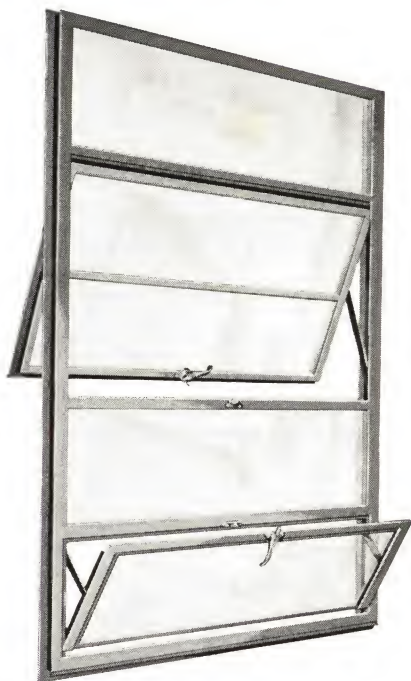


Cabana Lodge, Yakima, Wash.
Owner Strom, Builder



McConaughy Terrace Housing Project, New Haven, Conn.
Douglas Orr, Archt.; Fusco-Amatruda, Contr.

TRUSCON STEEL ARCHITECTURAL PROJECTED WINDOWS



Architectural Projected Window



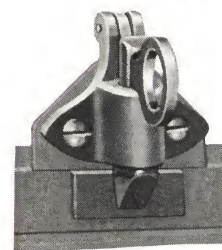
Pasadena School, Pasadena, Texas
Lloyd & Morgan, Archt.; Robert Nesmith, Contr.



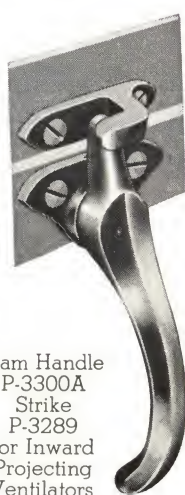
Cam Handle
P-3301A
for Outward Projecting
Ventilators



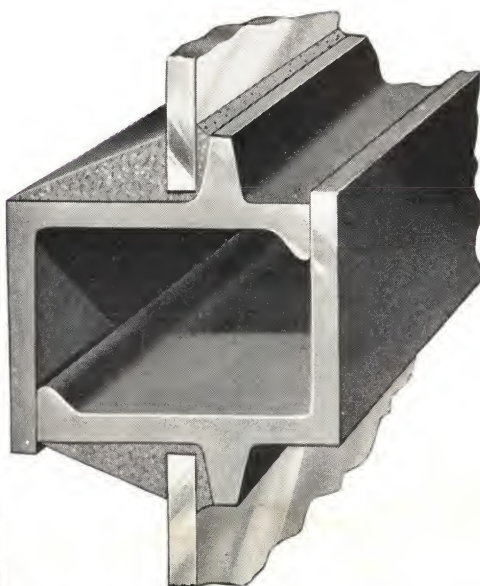
Spring
Latch
P-3461A
for Inward
Projecting
Pole
Operated
Vents
out of
reach
from
floor



Spring
Latch
SP-3461A
for Outward
Projecting
Vents out of
reach from
floor



Cam Handle
P-3300A
Strike
P-3289
for Inward
Projecting
Ventilators



NOTE: Full size section showing casement type weathering contacts, an exclusive Truscon feature on windows of this classification.

Truscon Architectural Projected Steel Windows are especially recommended for use in any building where ample ventilation and freedom from drafts are important considerations. Outward projecting ventilators may be kept open during inclement weather; the ventilator acting as a canopy to deflect the rain and yet allow ventilation. The lower, inward projecting ventilator prevents drafts by deflecting air currents towards the ceiling. Projected ventilators permit easy cleaning from the inside. Rigidity in even the largest ventilators is insured by the use of a heavy

one-piece casement type vent frame section, mortised and tenoned and welded at the corners. Windows are designed for outside putty glazing as standard. Underwriters' type must be inside angle glazed.

The integral baffles in Truscon's design of special hot rolled sections eliminate the uncertain weathering contacts characteristic of the usual steel window shapes, thus reducing air infiltration to a minimum.

Solid bronze hardware is standard. Wicket screens may be used on any open-out vent furnished with standard cam handle. Open-in vents are furnished with flat screens.

TRUSCON STEEL ARCHITECTURAL PROJECTED WINDOWS

TYPES AND SIZES

NOTES

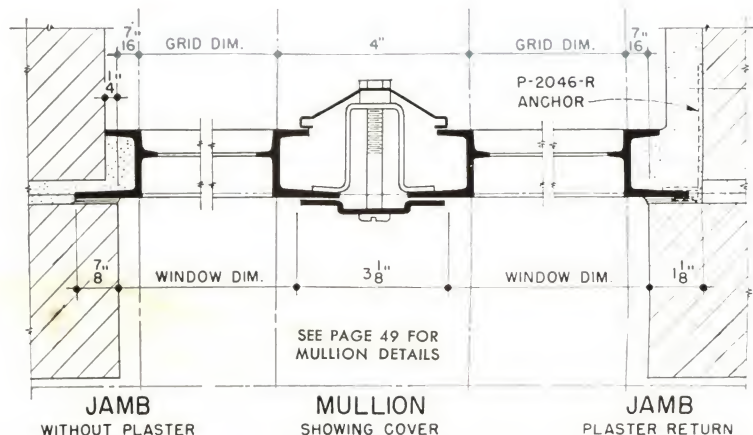
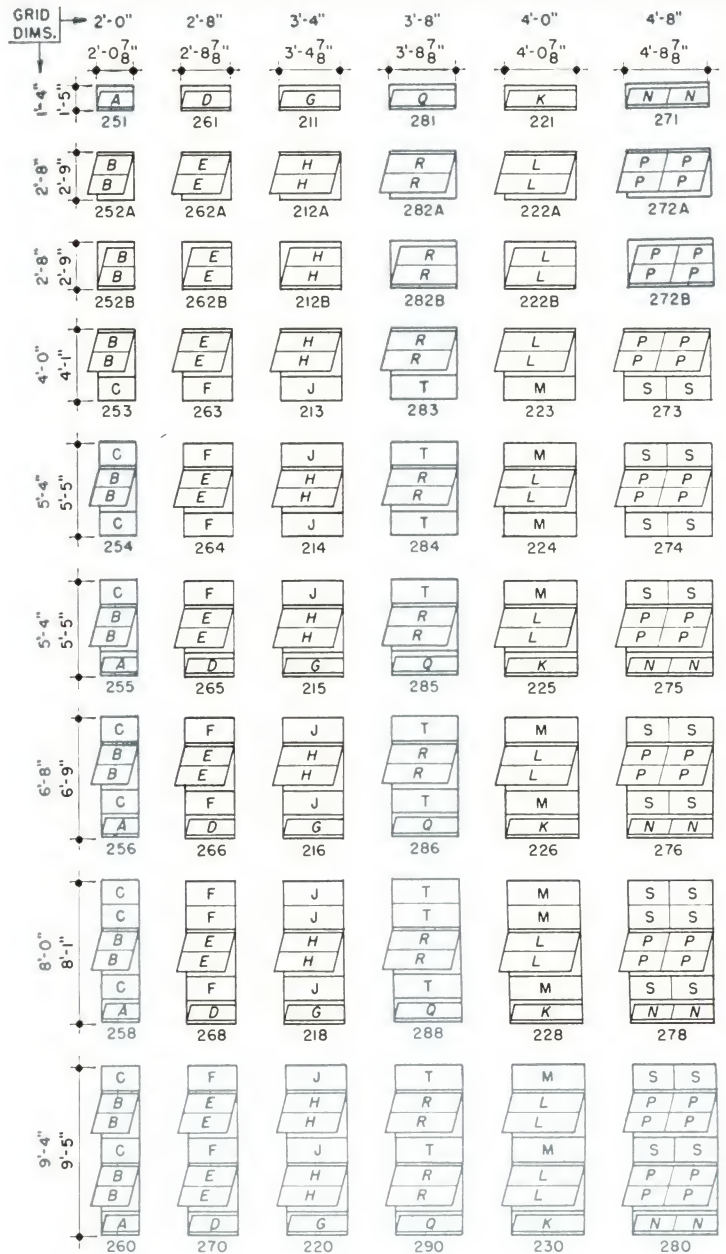
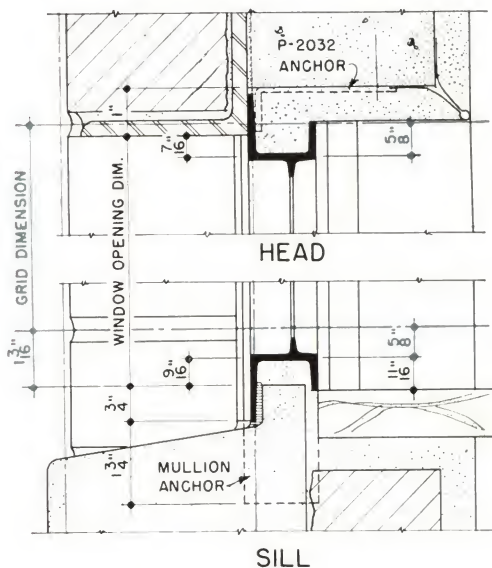
- DIMENSIONS SHOWN IN BLACK ARE WINDOW OPENING DIMENSIONS.
- WINDOWS ARE SHOWN AS VIEWED FROM THE OUTSIDE.
- FIXED UNITS IN ALL SIZES SHOWN ARE AVAILABLE ON FACTORY ORDER.
- **WAREHOUSE TYPES** INCLUDE ONLY UNITS PRINTED IN BLACK WITH VENTILATOR SWING EXACTLY AS SHOWN, AND EQUIPPED WITH HARDWARE CONSISTING OF CAM-ACTING LOCKING HANDLES FOR OPEN-OUT VENTS AND EITHER CAM-ACTING LOCKING HANDLES OR SPRING LATCHES FOR OPEN-IN VENTS. THESE UNITS ARE PREPARED FOR INTERIOR WICKET SCREENS ON OPEN-OUT VENTS, AND EXTERIOR FIXED SCREENS ON OPEN-IN VENTS.
- **FACTORY SHIPMENT TYPES** INCLUDE ALL WINDOWS SHOWN ON THIS PAGE. THEY MAY BE ORDERED TO HAVE THE SAME SCREENS AND HARDWARE AS WAREHOUSE TYPES, OR OPEN-OUT VENTS MAY BE ORDERED WITH SPRING LATCHES. OPEN-OUT VENTS MAY ALSO BE ORDERED FOR EQUIPMENT WITH FIXED INTERIOR SCREENS AND PUSH BARS.

SCHEDULE OF GLASS SIZES

MARK	GLASS SIZE	MARK	GLASS SIZE
A	21 $\frac{5}{8}$ " X 13 $\frac{5}{8}$ "	K	45 $\frac{5}{8}$ " X 13 $\frac{5}{8}$ "
B	21 $\frac{5}{8}$ " X 14 $\frac{5}{8}$ "	L	45 $\frac{5}{8}$ " X 14 $\frac{5}{8}$ "
C	23 $\frac{5}{8}$ " X 15 $\frac{5}{8}$ "	M	47 $\frac{5}{8}$ " X 15 $\frac{5}{8}$ "
D	29 $\frac{5}{8}$ " X 13 $\frac{5}{8}$ "	N	26 $\frac{5}{8}$ " X 13 $\frac{5}{8}$ "
E	29 $\frac{5}{8}$ " X 14 $\frac{5}{8}$ "	P	26 $\frac{5}{8}$ " X 14 $\frac{5}{8}$ "
F	31 $\frac{5}{8}$ " X 15 $\frac{5}{8}$ "	Q	41 $\frac{5}{8}$ " X 13 $\frac{5}{8}$ "
G	37 $\frac{5}{8}$ " X 13 $\frac{5}{8}$ "	R	41 $\frac{5}{8}$ " X 14 $\frac{5}{8}$ "
H	37 $\frac{5}{8}$ " X 14 $\frac{5}{8}$ "	S	27 $\frac{5}{8}$ " X 15 $\frac{5}{8}$ "
J	39 $\frac{5}{8}$ " X 15 $\frac{5}{8}$ "	T	43 $\frac{5}{8}$ " X 15 $\frac{5}{8}$ "

NOTE

- TOTAL OPENING WIDTHS OF MULTIPLE UNIT OPENINGS MAY BE SPEEDILY DETERMINED BY USING GRID DIMENSIONS OF WINDOWS (SHOWN IN COLOR AT RIGHT) AND MULLIONS (4") AND ADDING $\frac{7}{16}$ " TO TOTAL GRID WIDTH FOR NECESSARY CLEARANCE AT JAMBS.



SEE PAGE 49 FOR MULLION DETAILS

TRUSCON STEEL ARCHITECTURAL PROJECTED WINDOWS

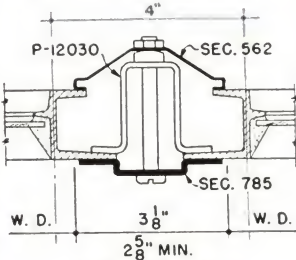
SPECIFICATIONS

MULLION AND COVERS

COVERS FURNISHED ONLY WHEN SPECIFIED
SEE PAGE 57 FOR SILL ANCHORAGE

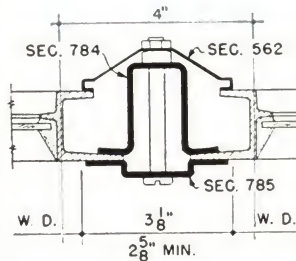
MODULAR MULLIONS

BASED UPON A 4" GRID DIMENSION, MULTIPLE UNIT OPENINGS ARE ALWAYS MODULAR IN WIDTH.



TYPE 1-M

FOR WINDOWS UP TO AND INCLUDING 6'-9" IN HEIGHT

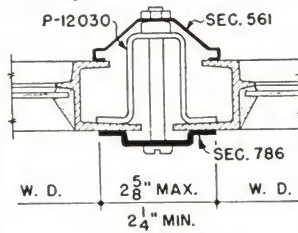


TYPE 2-M

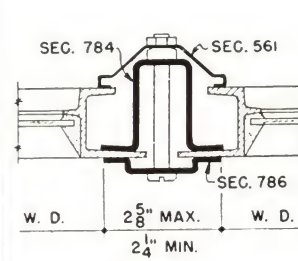
FOR WINDOWS OVER 6'-9" IN HEIGHT

SPECIAL MULLIONS

AVAILABLE FROM FACTORY ON SPECIAL ORDER ONLY.
SPECIAL DESIGN COVERS REQUIRED WHEN MULLION DIMENSION IS LESS THAN 2 3/8".

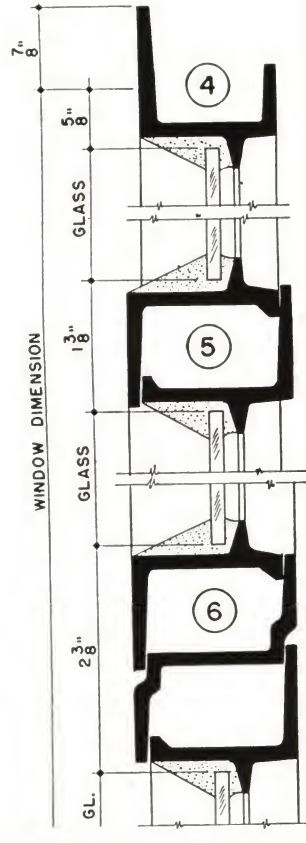
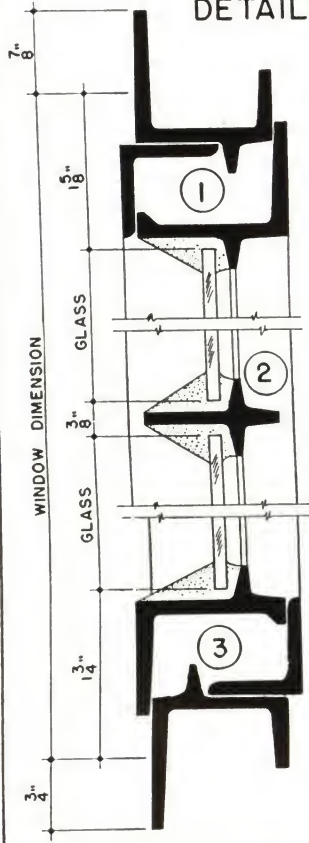


TYPE 1



TYPE 2

DETAILS



1. Specif — Architectural Projected Steel Windows as manufactured by Truscon Steel Division, Republic Steel Corporation, Youngstown, Ohio.

2. Material and Construction — All members shall be made from new billet steel. Frame section shall be a heavy unequal leg channel not less than 1 7/16" deep. Ventilator sections shall be of one piece hot rolled angle shapes, not less than 1 5/16" deep, with integral weathering baffle providing closure contact with the frame member not less than 1/4" in contact width. All joints shall be mortised and tenoned and air hammer riveted. In addition, all frame and ventilator corners shall be welded. Double flat contact weathering shall be provided on all four sides of the ventilator. Ventilators shall be balanced on two 3/4" x 3/16" steel arms riveted to ventilator and frame. Rivet holes shall have brass flange bushings. Uniform tension to hold ventilators in an open position shall be obtained by two sliding friction shoes of forged bronze with compression spring enclosed in steel tubing. The sides of the frame shall act as guides for the sliding friction shoes. Windows shall be designed for **outside** glazing with wire glazing clips and steel window putty or glazing compound.

3. Unattached Hardware — Hardware shall be solid bronze, rough finished. Cam handle with strike, and pole ring shall be furnished for outward projecting ventilators; cam handle with keeper for inward projecting. Pole operated spring latches shall be furnished in place of cam handles for all ventilators not within reach of floor. (Underscreen push bar to open or close the ventilator without moving the screen will be furnished for outward projecting ventilators when so specified and at extra cost.)

4. Vertical Mullions and Covers — Standard vertical mullions and covers, where required, shall tightly connect adjacent window units with secure and weathertight joints. Mullions shall consist of an exterior crimped plate rigidly clamped at 16" centers by machine bolts to interior channel clips (for windows 7'-0" or less in height) or to a continuous "U" shaped section (for windows over 7'-0" in height).

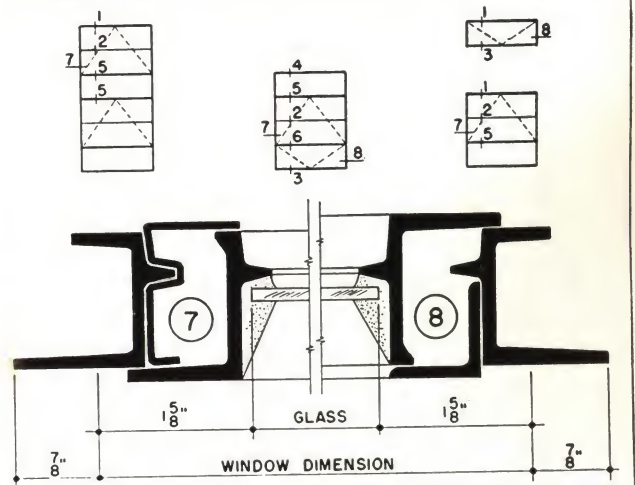
Covers shall be a formed plate tightly bolted to the mullion and shall completely close the interior recesses between window jamb.

5. Shop Painting — All windows shall be bonderized and given a dip coat of gray Bakelite paint, oven-baked for one hour at 300 degrees Fahrenheit.

6. Erection — Windows shall be set plumb and true in openings. The joint between the window frame and masonry shall be carefully caulked by caulking contractor. Contacts between windows and adjacent steel, including mullions, shall be sealed with mastic furnished and applied by the erector. All ventilators shall be adjusted before glazing. Hardware shall be attached after glazing and field painting.

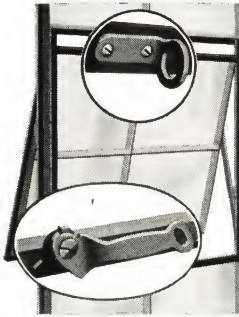
7. Glazing — Windows shall be glazed on the **outside**. Glass shall be bedded with steel window putty, held in place by wire glazing clips, and face puttied to a neat trim line. All glazing materials, including glazing clips, furnished by others.

8. Windows with Underwriters' Labels — (National Board of Fire Underwriters.) The same specifications as outlined above, but with the following limitations, apply to windows with Underwriters' label of approval: Windows must be inside angle glazed. Hardware must be malleable iron or steel. Individual glass lights must not exceed 54" in height, 48" in width, nor 350 square inches in exposed area.

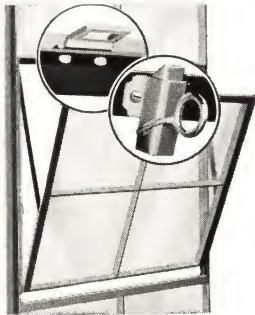


TRUSCON STEEL INDUSTRIAL WINDOWS

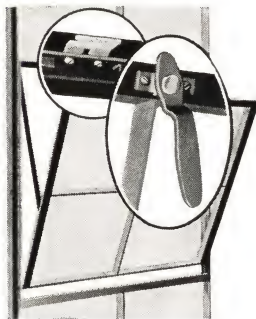
COMMERCIAL PROJECTED



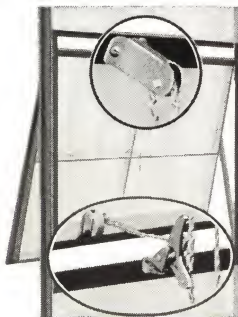
SET 200
Hand or Pole Operation
for Outward Projecting Ventilator



SET 203
Hand or Pole Operation
for Inward Projecting Ventilator



SET 209
Hand Operation
for Inward Projecting Ventilator



SET 201
Spring Latch and Chain
for Outward Projecting Ventilator
(Set 201 will be furnished at
extra cost)



A. O. Smith Co., Pipe Mill, Houston, Texas; The Austin Co., Designer & Builders.

In the projecting type window, the ventilator, when open, does not extend beyond one face of the window plane. Projecting outward ventilators do not extend inside the window, while projecting inward ventilators do not extend outside the window. Projecting outward ventilators are used where it is necessary to have free aisle space along the window wall, where shading is important, or where pipes, conduits, racks, etc., pass across the ventilator. Projecting inward ventilators are used when the building is close to the property line or when economical screening is required. Both types of ventilators permit cleaning of the outside of the glass from within. Ventilators are held in any desired open position by forged brass sliding friction shoes.

(See page 52 for types and sizes, page 53 for notes)

SCREENS

Commercial Projected Windows may be simply and economically screened. Inward projecting ventilators are screened on the exterior side. For outward projecting ventilators, screens and hardware of two designs are available.

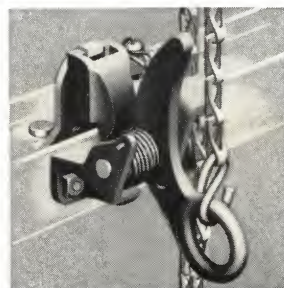
The Truscon wicket screen is tightly fastened to the window with four screws. The hinged wicket, built into the screen, allows plenty of room for the hand and arm to pass through, to open or close the window. Wicket screens cannot be used for ventilators beyond the reach of the floor.

Fixed screens with a push bar operating underneath the screen are also available for project-out vents at extra cost. However, stock type windows cannot be so equipped as the windows must be specially prepared for the hardware. This design affords operation of the vent without touching the screen.

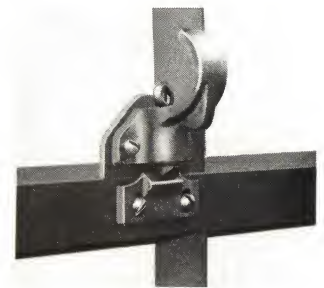
Projecting inward ventilators with fixed screens on the outside are recommended for all openings beyond reach of the floor and where conditions demand that no portion of the screen, however small, be opened when opening or closing windows.

EXPLOSION TYPE HARDWARE

Explosion type hardware conforming to specifications of Associated Factory Mutual Fire Insurance Companies can be furnished at slightly increased cost over standard hardware for outward projecting ventilators. This hardware allows the ventilator to open automatically in case of explosion.



Left:
Explosion Latch
P-11052
Chain Operated



Right:
Explosion Latch
P-1884
Hand or Pole
Operated

TRUSCON STEEL INDUSTRIAL WINDOWS**PIVOTED**

Pivoted Windows are the low cost type predominantly used in industrial buildings. Although Truscon's product is priced with the lowest, every worthwhile feature of design and construction has been included to make the window sturdy, long lasting, weathertight, and easy to operate.

Ventilators are pivoted 2" above the center line to swing in at the top and out at the bottom. Double contact weathering is provided all around, and hardware, though inexpensive, is rugged and positive in action.

As the ventilators are almost balanced and free of friction, Pivoted Windows are ideally suited for group operation of long runs and large bays by a single control mechanical operator. This feature finds wide use in large industrial plants, power houses, etc.

Screening of Pivoted Windows is difficult and complicated. When screened openings are required, we recommend the use of Commercial Projected Windows.

(See page 53 for types and sizes and for notes)

CAM ACTING PUSH BAR

Cam acting push bar hardware is furnished when the ventilator is within easy reach of the floor. The push bar is used for holding the ventilator open in any desired position and also for locking the ventilator. By folding the push bar back against the window and engaging it in the cleat, the ventilator is drawn up weathertight and locked. Unless otherwise specified, push bar hardware will always be furnished.

SPRING LATCH AND CHAIN

Spring latch and chain hardware is furnished when the ventilator is not within easy reach of the floor. A slight pull on the chain, which passes through the roller bracket fastened to the top of the ventilator, releases the latch and opens the ventilator. The ventilator is held open in any position by fastening the chain into the chain hook. Ventilators close and lock by gravity when the chain is disengaged. (In ordering, always advise the sill height above the floor, so that correct amount of chain and correct type of chain hook may be supplied.)

CAM LATCH AND CHAIN

Cam latch and chain hardware will be furnished only when orders specifically ask for it. This hardware is an alternate to standard spring latch and chain.

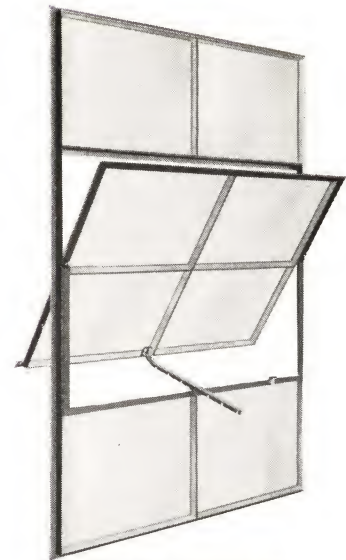
UNVENTILATED (FIXED) UNITS

"Fixed" Industrial Windows are available for use in conjunction with ventilated Industrial Windows, or they may be used alone where desired. Identical in design and construction, fixed units find their greatest application in locations where maximum ventilation is unnecessary or where interference with columns, cross-bracing, etc., preclude the use of a vented unit.

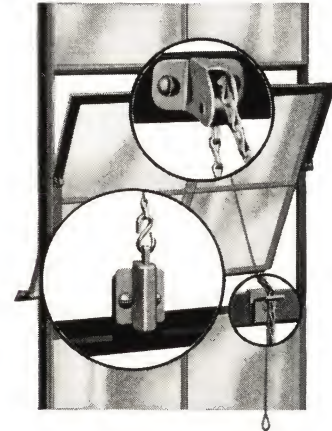
(See page 53 for types and sizes and for notes)

UNDERWRITERS' LABELED UNITS

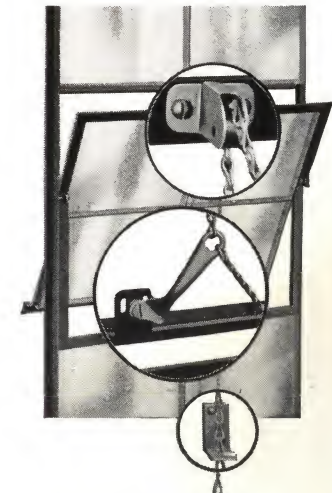
Industrial Windows may be manufactured, within certain limitations, to carry the label of approval of the National Board of Fire Underwriters. The principal requirement is the use of continuous glazing angles and with a maximum exposed glass area of 350 sq. in. per light. For other limitations, refer to specifications.

**PUSH BAR HARDWARE**

For Ventilator within reach of floor
Sets 10, 13, 16, 19, 22 and 25
(Push Bar Lengths)

**SPRING LATCH HARDWARE**

For Ventilator not within reach of floor
Set 1 with Vent Sill Chain Hook
Set 2 with Muntin Chain Hook
Set 3 with Wall Chain Hook

**CAM LATCH HARDWARE**

For Ventilator not within reach of floor
Set 5 with Wall Chain Hook
Set 7 with Vent Sill Chain Hook
Set 9 with Muntin Chain Hook

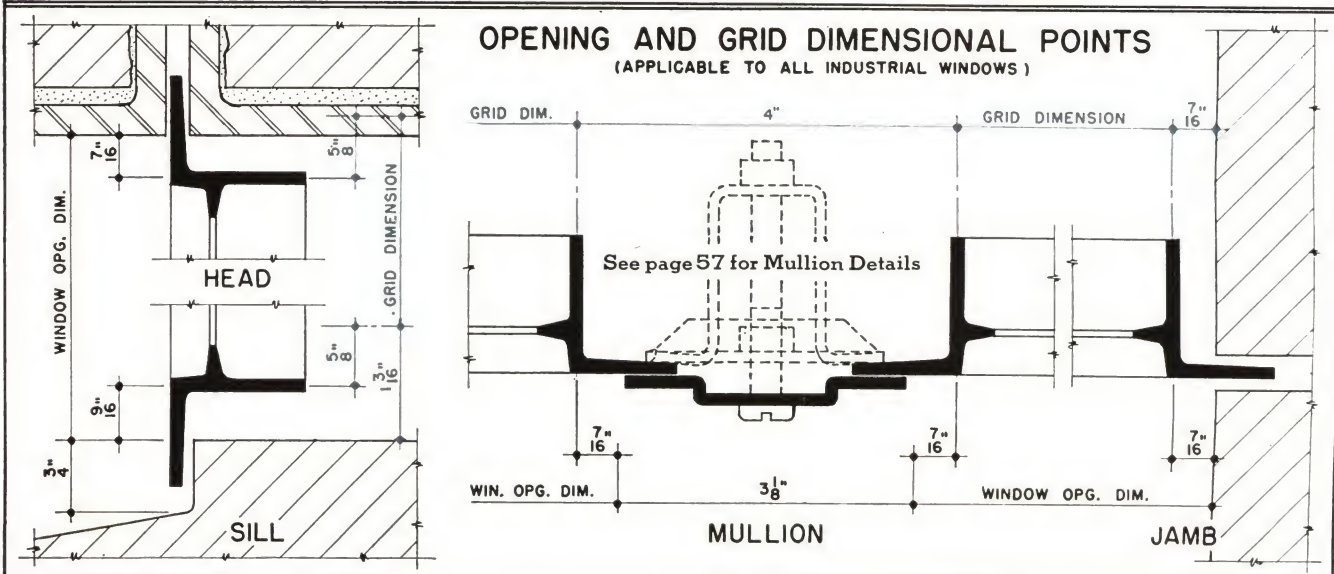
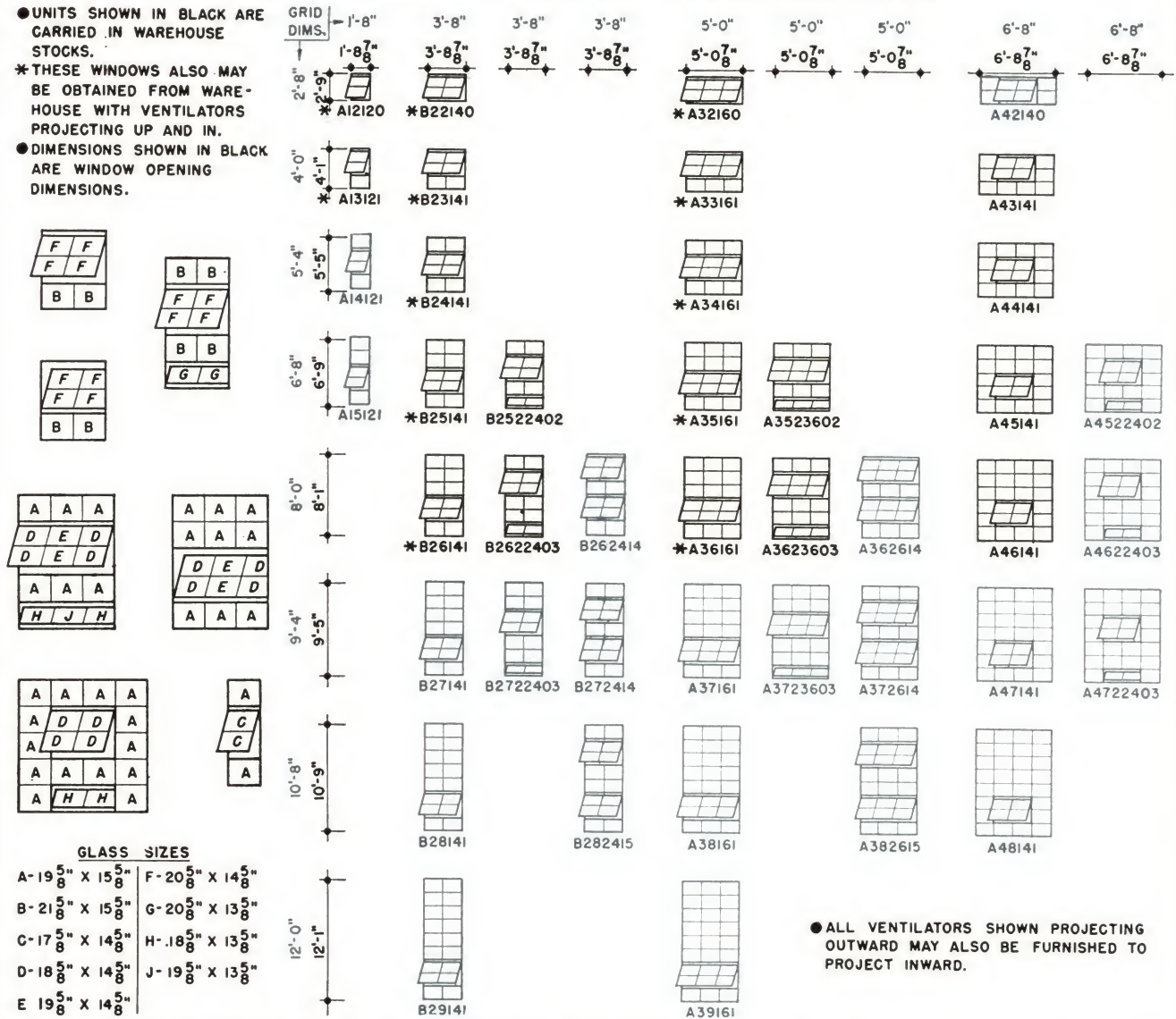
TRUSCON STEEL INDUSTRIAL WINDOWS

COMMERCIAL PROJECTED - TYPES AND SIZES

● UNITS SHOWN IN BLACK ARE CARRIED IN WAREHOUSE STOCKS.

* THESE WINDOWS ALSO MAY BE OBTAINED FROM WAREHOUSE WITH VENTILATORS PROJECTING UP AND IN.

● DIMENSIONS SHOWN IN BLACK ARE WINDOW OPENING DIMENSIONS.



TRUSCON STEEL INDUSTRIAL WINDOWS

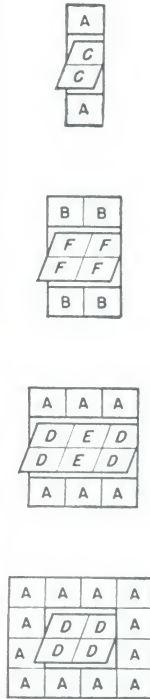
FIXED-TYPES & SIZES

GRID DIMS.	1'-8"	3'-8"	5'-0"	6'-8"
2'-8"	A12	B22	A32	A42
4'-0"	A13	B23	A33	A43
5'-4"	A14	B24	A34	A44
6'-8"	A15	B25	A35	A45
8'-0"		B26	A36	A46
9'-4"		B27	A37	A47
10'-8"		B28	A38	A48
12'-0"		B29	A39	A49

- UNITS SHOWN IN BLACK ARE CARRIED IN WAREHOUSE STOCKS.
- DIMENSIONS SHOWN IN BLACK ARE WINDOW OPENING DIMENSIONS.
- GLASS SIZES -
"A" TYPE UNITS - 19 $\frac{5}{8}$ " X 15 $\frac{5}{8}$ "
"B" TYPE UNITS - 21 $\frac{5}{8}$ " X 15 $\frac{5}{8}$ "

PIVOTED - TYPES AND SIZES

GRID DIMS.	1'-8"	3'-8"	3'-8"	5'-0"	5'-0"	6'-8"	6'-8"
2'-8"	A12120	B22140		A32160		A42140	
4'-0"	A13121	B23141		A33161		A43141	
5'-4"	A14121	B24141		A34161		A44141	
6'-8"	A15121	B25141	B25142	A35161	A35162	A45141	A45142
8'-0"		B26141	B262414	A36161	A362614	A46141	A462414
9'-4"		B27141	B272414	A37161	A372614	A47141	A472414
10'-8"		B28141	B282415	A38161	A382615	A48141	A482415
12'-0"		B29141		A39161			



GLASS SIZES

- A-19 $\frac{5}{8}$ " X 15 $\frac{5}{8}$ "
- B-21 $\frac{5}{8}$ " X 15 $\frac{5}{8}$ "
- C-17 $\frac{5}{8}$ " X 14 $\frac{5}{8}$ "
- D-18 $\frac{5}{8}$ " X 14 $\frac{5}{8}$ "
- E-19 $\frac{5}{8}$ " X 14 $\frac{5}{8}$ "
- F-20 $\frac{5}{8}$ " X 14 $\frac{5}{8}$ "

● DIMENSIONS SHOWN IN BLACK ARE WINDOW OPENING DIMENSIONS.

NOTES

(Applicable to All Industrial Windows)

Multiple Unit Openings. Total opening widths may be speedily determined by using grid dimensions of windows (shown in color) and mullions (4"), and adding $\frac{7}{8}$ " to total grid width for necessary clearance at jambs. Also, see table of "Multiple Unit Openings" on page 56.

Mullion Details. See page 57 for vertical mullion (and cover) details, and page 58 for horizontal mullions.

Installation Details. See page 59

Typical Sections. See page 55

Specifications. See page 60.



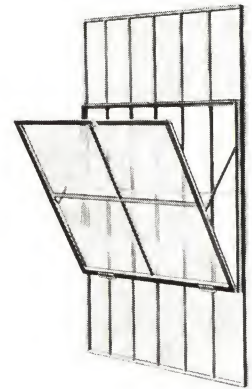
Ford Motor Co. Parts Depot, 5800 Grant Avenue, Cleveland, Ohio
McGeorge & Hargett, Archts. and Engrs.; H. K. Ferguson Co., Gen. Contrs.

TRUSCON STEEL INDUSTRIAL WINDOWS — SECURITY TYPES

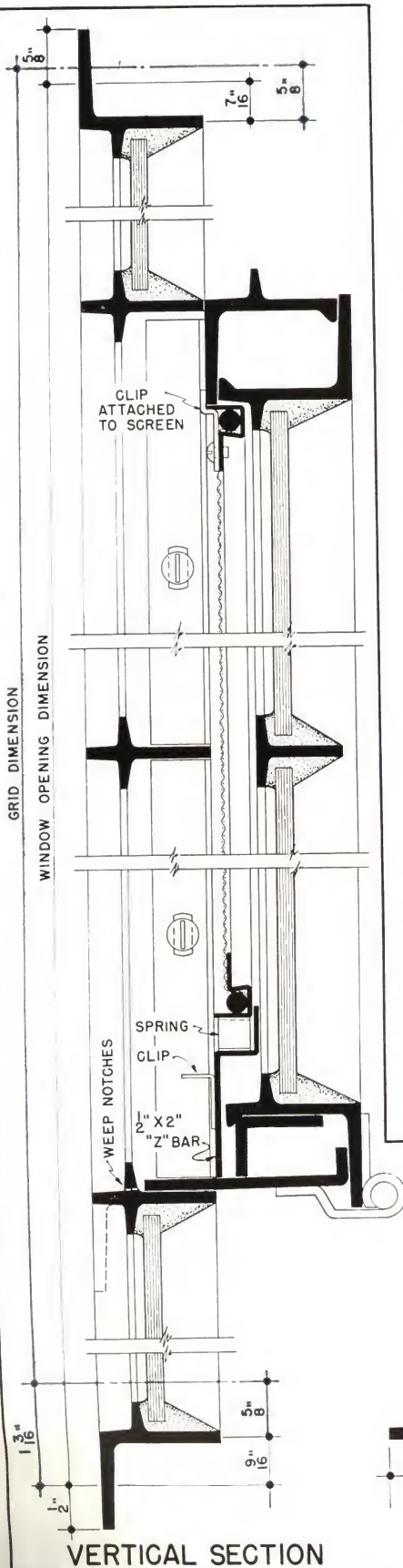
Truscon Security Windows are designed and constructed to assure adequate strength for effectively resisting unauthorized entry to store buildings, warehouses, and commercial and industrial buildings.

Glazing of the main frame is omitted where vents occur and glass is set in the vent instead. Vents are bottom hinged to swing in. Opening is limited to 35° by friction side arms.

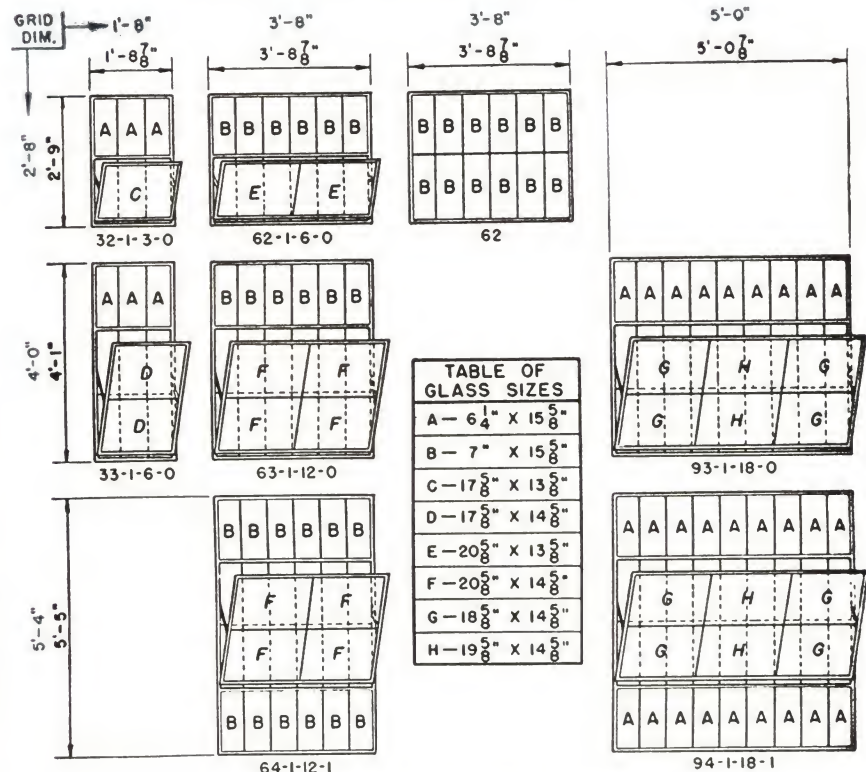
Screens may be conveniently installed into a recess provided for them between ventilator and main frame.



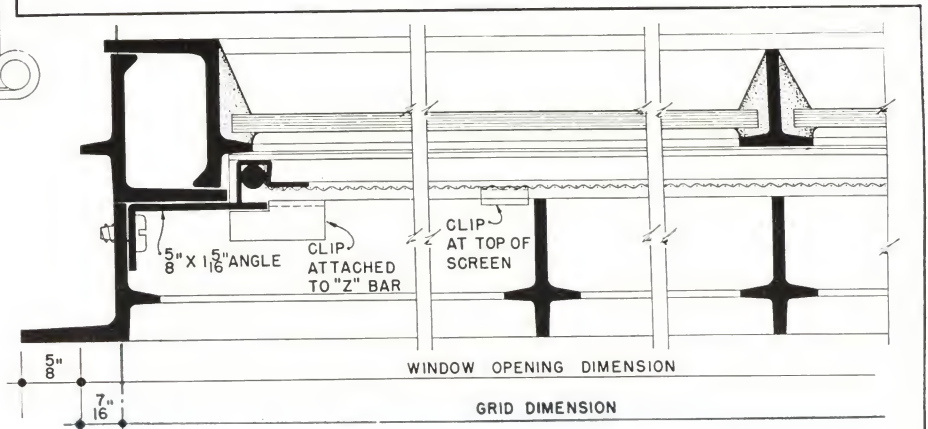
(See following pages for Multiple Unit Openings, Mullions, Installation Details and Specifications.)



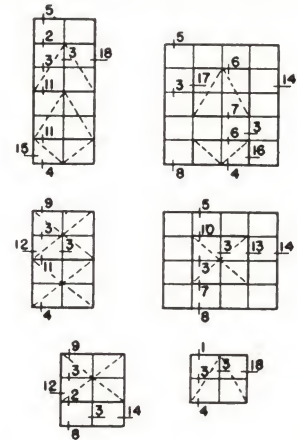
VERTICAL SECTION



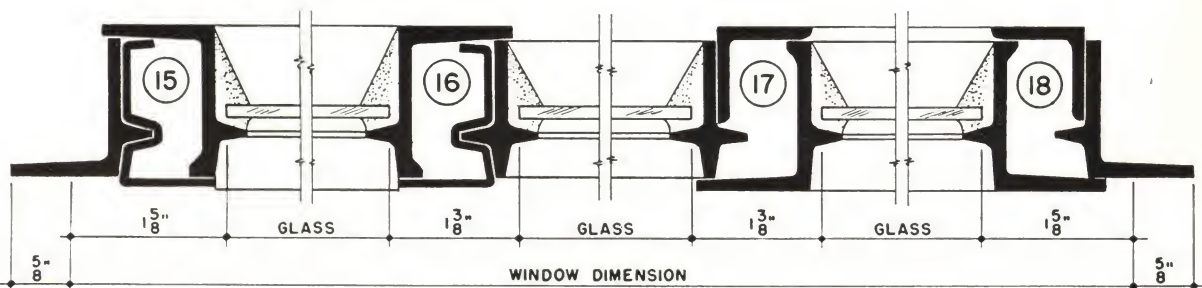
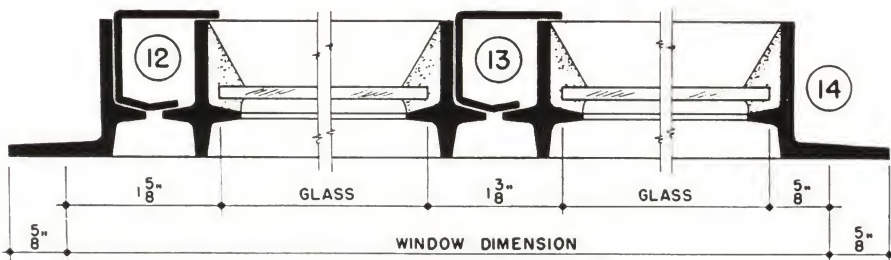
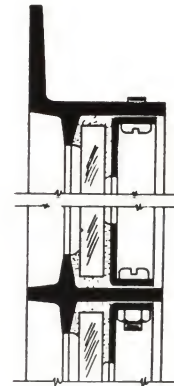
ALL UNITS VIEWED FROM THE INSIDE



HORIZONTAL SECTION

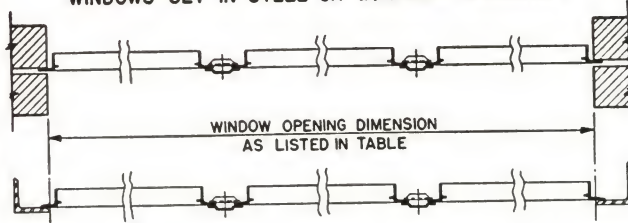


UNDERWRITERS' LABELLED WINDOWS
INDUSTRIAL WINDOWS MAY BE MANUFACTURED, WITH CERTAIN LIMITATIONS, TO BEAR THE LABEL OF APPROVAL OF THE NATIONAL BOARD OF FIRE UNDERWRITERS. THE PRINCIPAL REQUIREMENT IS THE USE OF CONTINUOUS GLAZING ANGLES AS SHOWN BELOW. FOR OTHER LIMITATIONS, REFER TO SPECIFICATIONS OF COMMERCIAL PROJECTED, PIVOTED, AND SECURITY WINDOWS.

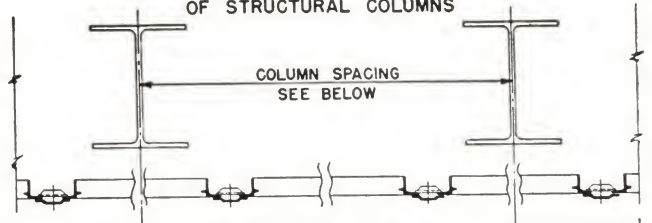


TRUSCON STEEL INDUSTRIAL WINDOWS COMMERCIAL PROJECTED—FIXED—PIVOTED—SECURITY MULTIPLE UNIT OPENINGS

OPENING DIMENSIONS FOR SINGLE AND MULTIPLE UNIT WINDOWS
WINDOWS SET IN STEEL OR MASONRY OPENINGS



WINDOWS IN CONTINUOUS BANDS SET IN FRONT OF STRUCTURAL COLUMNS

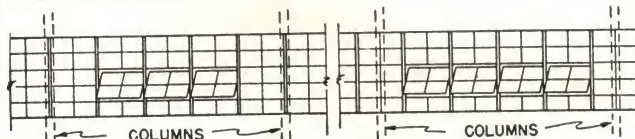


WINDOW OPENING DIMENSION	QUANTITY AND WIDTHS OF WINDOWS USED IN OPENINGS LISTED				MULLIONS REQUIRED 3/8" MULL. DIM.
	1'-8 7/8" 1 LIGHT	3'-8 7/8" 2 LIGHTS	5'-0 7/8" 3 LIGHTS	6'-8 7/8" 4 LIGHTS	
1'-8 7/8"	1	---	---	---	---
3'-8 7/8"	---	1	---	---	---
5'-0 7/8"	---	---	1	---	---
6'-8 7/8"	---	---	---	1	---
7'-8 7/8"	---	2	---	---	1
9'-8 7/8"	1	2	---	---	2
10'-4 7/8"	---	---	2	---	1
11'-8 7/8"	---	3	---	---	2
13'-0 7/8"	---	2	1	---	2
13'-8 7/8"	---	---	---	2	1
14'-4 7/8"	---	1	2	---	2
14'-8 7/8"	---	2	---	1	2
15'-8 7/8"	---	---	3	---	2
15'-8 7/8"	---	4	---	---	3
17'-4 7/8"	---	---	2	1	2
17'-8 7/8"	---	1	---	2	2
18'-4 7/8"	---	2	2	---	3
19'-0 7/8"	---	---	1	2	2
19'-8 7/8"	---	5	---	---	4
20'-8 7/8"	---	---	---	3	2
21'-0 7/8"	---	---	4	---	3
21'-8 7/8"	---	2	---	2	3
22'-4 7/8"	---	3	2	---	4
23'-8 7/8"	---	6	---	---	5
23'-8 7/8"	---	2	3	---	4
24'-4 7/8"	---	---	2	2	3
25'-0 7/8"	---	1	4	---	4
25'-8 7/8"	---	3	---	2	4
26'-4 7/8"	---	---	5	---	4

NOTE:— FOR GRID DIMENSION DEDUCT 7/8" FROM WINDOW OPENING DIMENSION

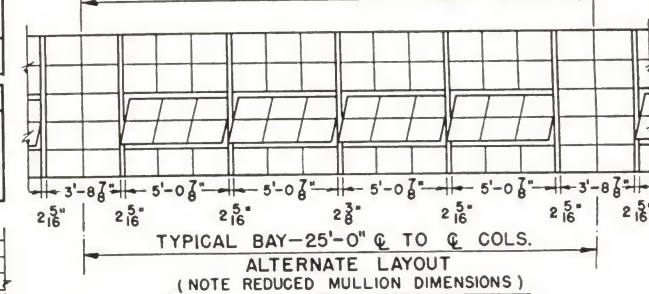
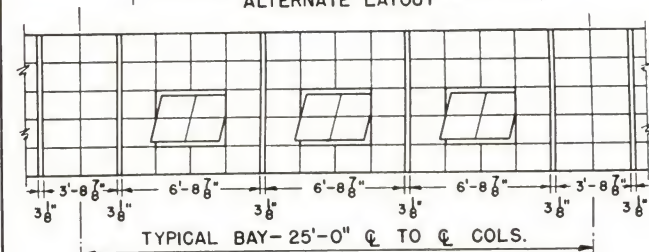
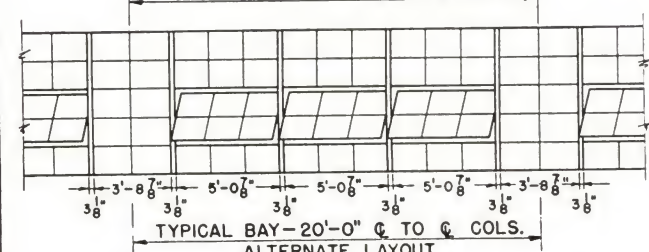
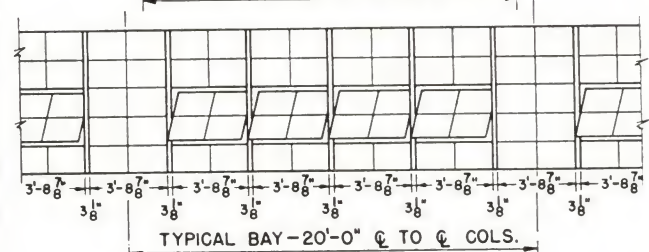
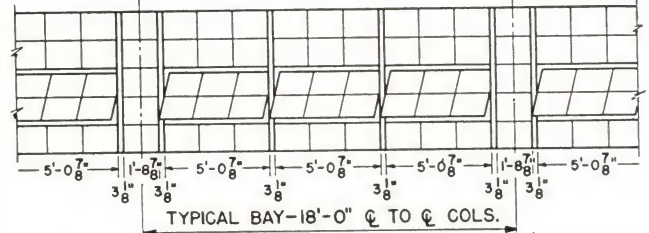
OPENING HEIGHT DIMENSIONS

2 LIGHTS	2'-9"	6 LIGHTS	8'-1"
3 LIGHTS	4'-1"	7 LIGHTS	9'-5"
4 LIGHTS	5'-5"	8 LIGHTS	10'-9"
5 LIGHTS	6'-9"	9 LIGHTS	12'-1"



TWO FIXED UNITS, WITH RESULTING DECREASE IN VENTILATING AREA, MUST BE USED PER BAY WHERE MULLIONS ARE CENTERED ON COLS.

ONE FIXED UNIT ONLY MUST BE USED PER BAY WHERE FIXED UNITS ARE CENTERED ON COLUMNS.



NOTE

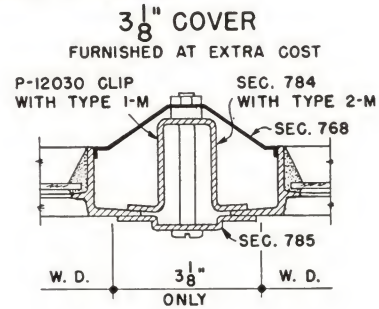
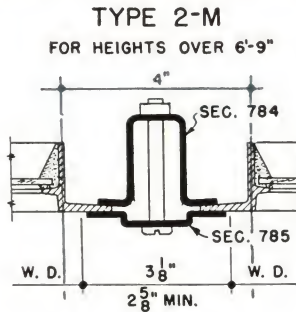
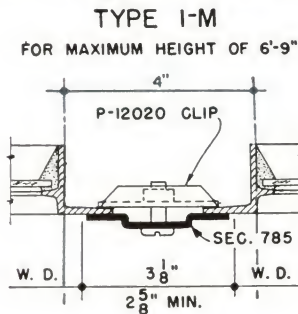
TO OBTAIN MAXIMUM VENTILATING AREA, FIXED UNITS ARE SHOWN CENTERED ON COLUMNS IN TYPICAL BAYS ABOVE. IF MULLIONS ARE CENTERED ON COLUMNS, THEN ONE UNIT NOW VENTILATED MUST BE CHANGED TO FIXED TYPE AS OTHERWISE VENTILATOR WOULD FOUL ON COLUMN. SEE SKETCHES AT LEFT.

TRUSCON STEEL INDUSTRIAL WINDOWS

COMMERCIAL PROJECTED — FIXED — PIVOTED — SECURITY MULLIONS

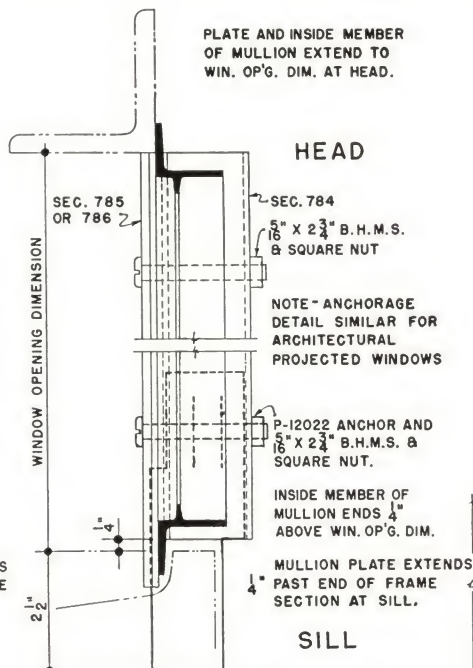
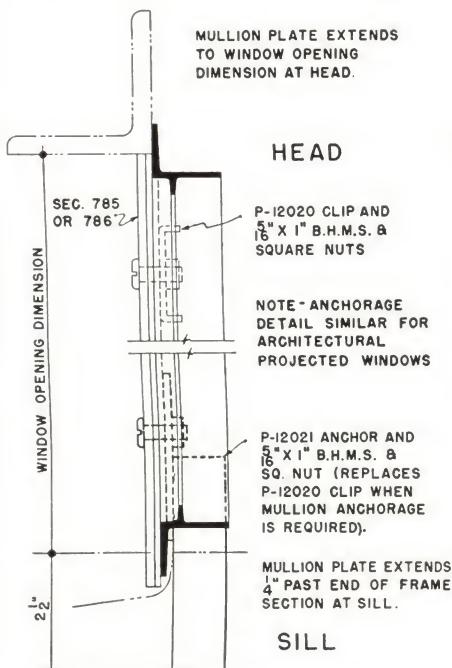
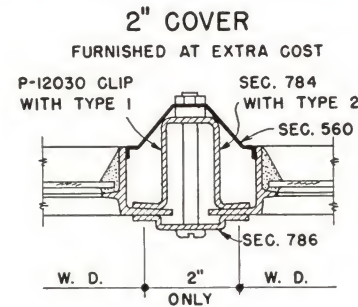
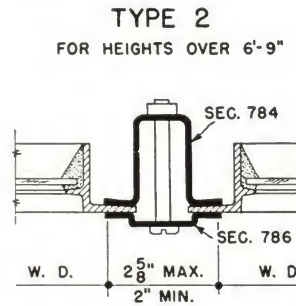
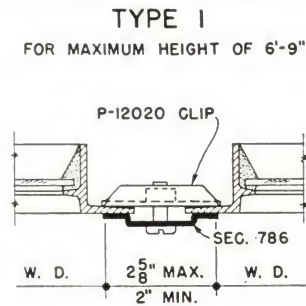
MODULAR MULLIONS

TABLES OF OPENING WIDTHS AND CONTINUOUS BAND WINDOWS (EXCEPT ONE 25'-0" BAY) SHOWN ON OPPOSITE PAGE, ARE BASED UPON THE USE OF TYPES 1-M AND 2-M MULLIONS. THE 4" GRID DIMENSION FOR MULLIONS RESULTS IN MODULAR SIZES FOR ALL MULTIPLE UNIT OPENINGS.—THE 3 1/8" DIMENSION MAY BE VARIED SLIGHTLY TO COMPENSATE FOR NORMAL BUILDING TOLERANCES.



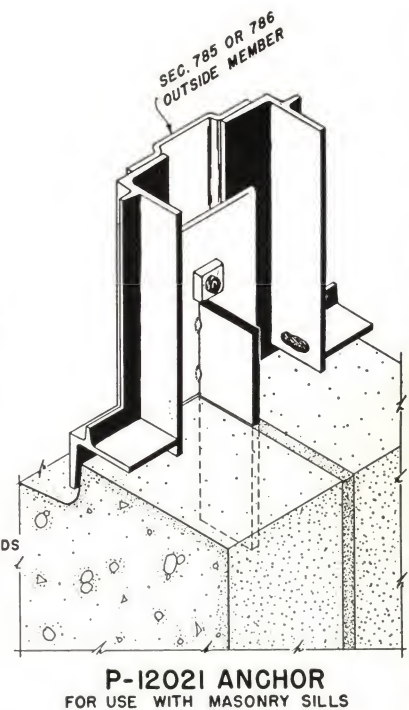
SPECIAL MULLIONS

MULLION TYPES 1 AND 2 ARE AVAILABLE FROM FACTORY ON SPECIAL ORDER ONLY.—THEY ARE SUITABLE FOR USE WITH PRE-WAR 14" X 20" OR 12" X 18" WINDOW UNITS BUT IN ADDITION, MAY BE USED WITH THE NEW MODULAR SIZES WHEN NECESSARY TO REDUCE STANDARD WIDTHS OF MULTIPLE UNIT OPENINGS.



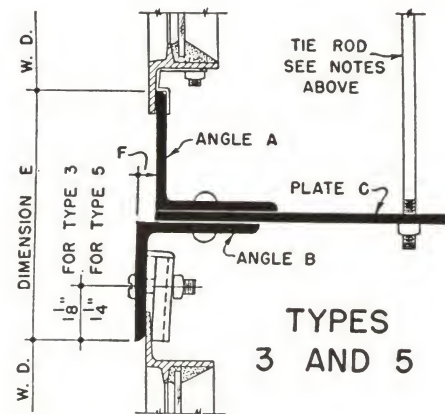
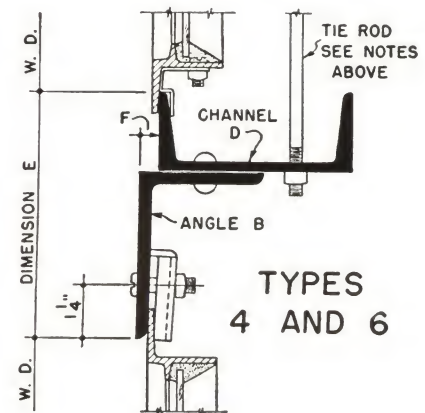
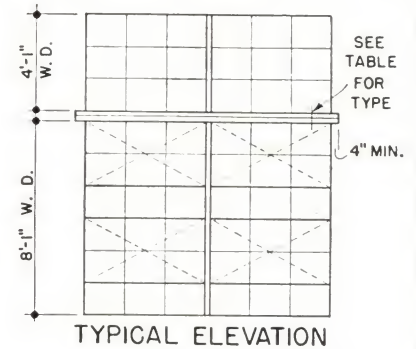
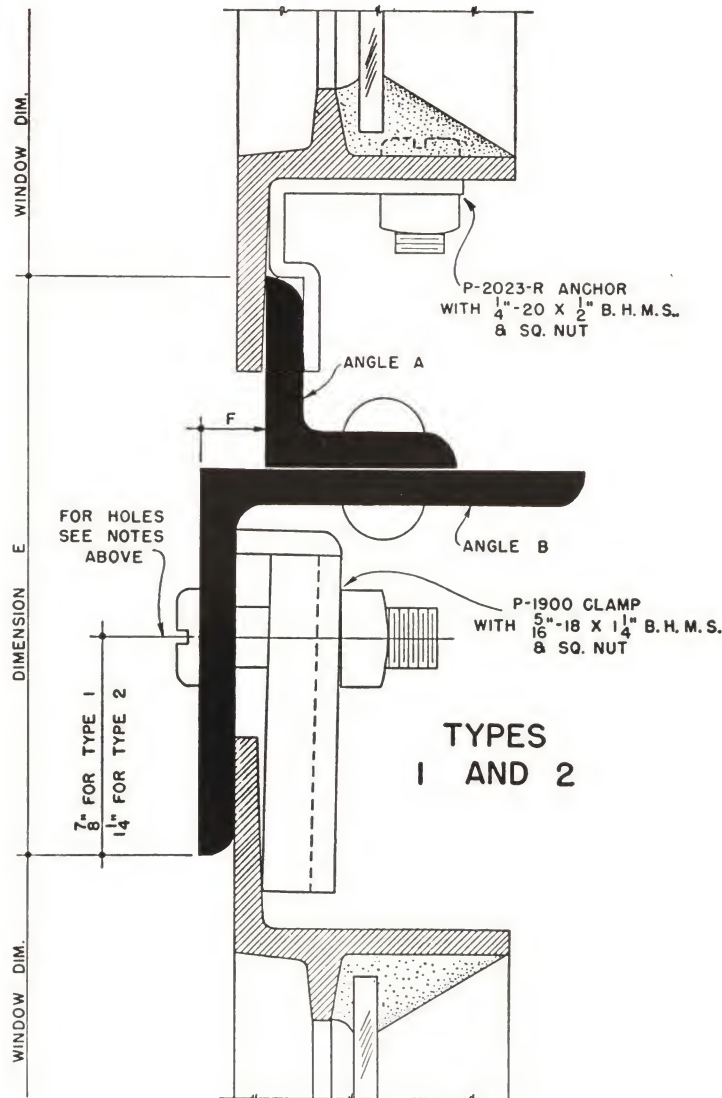
TYPES 1 & 1-M MULLIONS
SHOWING SILL ANCHORAGE

TYPES 2 & 2-M MULLIONS
SHOWING SILL ANCHORAGE



TRUSCON STEEL INDUSTRIAL WINDOWS
COMMERCIAL PROJECTED—FIXED—PIVOTED—SECURITY
HORIZONTAL MULLIONS

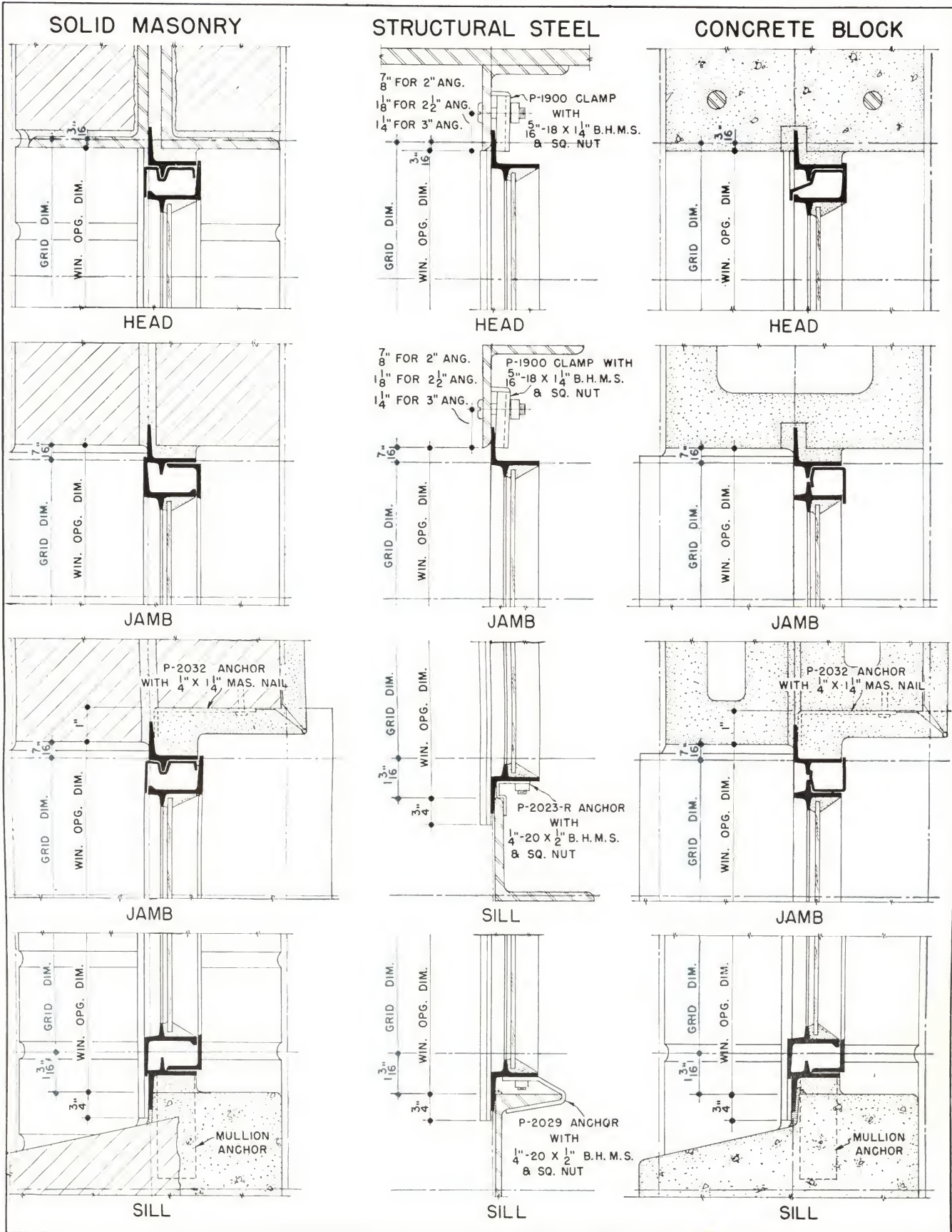
- HORIZONTAL MULLIONS ARE NOT FURNISHED OR ERECTED BY TRUSCON. THE DESIGNS HERE SHOWN ARE SUGGESTIONS ONLY AND TRUSCON IS NOT RESPONSIBLE FOR THEIR USE.
- CLIPS, BOLTS, AND SCREWS FOR ATTACHING WINDOWS TO MULLIONS WILL BE FURNISHED BY TRUSCON STEEL DIVISION. MULLION CONTRACTOR MUST PROVIDE 3/8" DIAMETER HOLES IN DOWN-STANDING LEG OF ANGLE MK. B FOR ATTACHMENT OF WINDOWS. THESE HOLES SHOULD BE SPACED 6" FROM JAMBS AND ABOUT 24" ON CENTERS. VERTICAL LOCATION AS PER DETAILS.
- MULLION DESIGN PERMITS ERECTION OF UPPER AND LOWER WINDOWS IN THE SAME PLANE.
- TIE RODS ATTACHED TO STRUCTURAL STEEL, ETC., MAY BE USED IN OPENINGS OVER 10'-0" WIDE TO BRACE HORIZONTAL MULLION. SPACE TIE RODS TO AVOID INTERFERENCE WITH VENTS.



* APPROX. MAX. OPENING DIMENSION	ALL SINGLE OPENINGS	10'-0"	11'-0"	14'-0"	15'-0"	20'-0"
MULLION TYPE	NO. 1	NO. 2	NO. 3	NO. 4	NO. 5	NO. 6
ANGLE A	1" X 1" X 3/16"	1 1/2" X 1 1/2" X 3/16"	2 1/2" X 2 1/2" X 3/16"		3" X 3" X 1/4"	
ANGLE B	2" X 2" X 3/16"	3" X 3" X 1/4"	2 1/2" X 2 1/2" X 3/16"	3 1/2" X 2 1/2" X 1/4"	3" X 3" X 1/4"	4" X 3" X 5/16"
PLATE C			6" X 3/16"		6" X 3/16"	
CHANNEL D				4" - 5.4 LB.		6" - 8.2 LB.
DIMENSION E	3"	4 1/2"	5 1/8"	5"	6 1/8"	5 7/8"
DIMENSION F	5/16"	3/8"	5/16"	3/8"	3/8"	7/16"

*FOR ACTUAL OPENING WIDTHS OF VARIOUS COMBINATIONS OF UNITS, REFER TO TABLE ON PAGE 56.
 FOR ANCHORAGE INTO MASONRY, MULLIONS SHOULD EXCEED OPENING WIDTH BY AT LEAST 8" (4" AT EACH JAMB).

TRUSCON STEEL INDUSTRIAL WINDOWS
COMMERCIAL PROJECTED — FIXED — PIVOTED
INSTALLATION DETAILS



TRUSCON STEEL INDUSTRIAL WINDOWS

SPECIFICATIONS

1. Specify — Industrial Windows (Commercial Projected, Pivoted, and/or Security) as manufactured by the Truscon Steel Division, Republic Steel Corporation, Youngstown, Ohio.

2. Material — All members shall be made from new billet steel, primarily designed for Industrial Window construction. Frame, muntin, and ventilator sections shall be hot rolled shapes not less than $\frac{3}{8}$ " thick and $1\frac{1}{4}$ " in depth except that muntins in ventilators of Security Windows may be 1" in depth. The frame member shall afford not less than $\frac{5}{8}$ " continuous anchorage to surrounding masonry.

3. Construction — All joints shall be mortised and tenoned and air hammer riveted. Muntins shall be continuous from head to sill and jamb to jamb. The intersections shall be dovetail mitered, rigidly interlocking the bars, and the end joints securely riveted to the frame member. Weathering members shall be welded to windows and shall provide double contact weathering around the entire perimeter of ventilators. Design of the windows shall provide for inside glazing with wire glazing clips and steel window putty or glazing compound. All glazing materials shall be furnished by the glazing contractor.

Commercial Projected Window ventilators shall be balanced on two $\frac{3}{4}$ " x $\frac{3}{16}$ " steel arms riveted to the ventilator and frame, and the rivet holes shall be brass bushed. Uniform tension to hold the ventilators in any open position shall be provided by two forged bronze sliding friction shoes with compression spring enclosed in steel tubing. The sides of the frame shall act as guides for the friction shoes.

Pivoted Window ventilators shall be pivoted 2" above center line. Pivots shall be solid steel, securely welded to ventilator and frame, and equipped with $\frac{3}{8}$ " diameter removable pins held in place with washers and cotter pins.

Security Windows shall be designed to afford protection against forced entry and shall consist of a grille and a ventilating window unit composed of a ventilator and its auxiliary frame superimposed on the inner face of the grille. The ventilator shall be hung on two substantial butt hinges and equipped with heavy supporting arms concealed within the jamb members when closed.

4. Unattached Hardware — All hardware shall be steel, painted or otherwise rust-proofed. For projected vents furnish cam handle and pole ring on open-out vents, and cam handle or spring latch on open-in vents. For pivoted vents furnish push bar hardware on vents within reach of floor and either spring or cam latch and chain for vents not within reach of floor. For Security Window vents a cam handle shall be supplied for attachment to top of vent.

5. Vertical Mullions and Covers — Standard vertical mullions, where required, shall tightly connect adjacent window units with secure and weathertight joints. Mullions shall consist of an exterior crimped plate rigidly clamped at 16" centers by machine

bolts to interior channel clips (for windows 7'-0" or less in height) or to a continuous "U" shaped section (for windows over 7'-0" in height.)

Standard vertical mullion covers (not applicable to Security Windows), where required, shall be a formed plate tightly bolted to the mullion. Covers shall completely close the interior recesses between window jambs and present a neat and workmanlike juncture.

6. Shop Painting — All windows shall be bonderized and given a dip coat of gray Bakelite paint, oven-baked for one hour at 300 degrees Fahrenheit.

7. Erection — Windows shall be set plumb and true in openings. The joint between the window frame and masonry shall be carefully caulked by caulking contractor. Contacts between windows and adjacent steel, including mullions, shall be sealed with mastic furnished and applied by the erector. All ventilators shall be adjusted and hardware attached before glazing.

8. Glazing — (To be done by glazing contractor). Windows shall be glazed on the inside. Glass shall be bedded with steel window putty, held in place by wire glazing clips, and face puttied to a neat trim line. All glazing materials, including glazing clips, furnished by others.

9. Screens — (Not recommended for Pivoted Windows). Screen frames shall be of formed steel, in the open-channel rewirable designs, with solid rod splines. Both frame and spline shall be electro-galvanized steel. Screen fastenings shall be designed to permit easy attachment or removal of screen from the interior side. Frames and splines shall be bonderized and given one coat of gray Bakelite enamel, oven-baked. Screen cloth shall be of bronze or galvanized steel, woven to 18 x 14 mesh. Open-in vents, Projected and Security, shall have fixed screens attached to the outside of the ventilator frame. Project-out vents shall have hinged wicket type screens to provide access to the locking handle, or fixed screens when underscreen push bar is used.

10. Windows with Underwriters' Label — (National Board of Fire Underwriters). The same specifications as outlined above for Industrial Windows apply to windows with Underwriters' label of approval, but with the following limitations:

Commercial Projected and Pivoted Windows must be inside angle glazed and exposed glass area of individual lights must not exceed 48" in width, 54" in height, and 350 square inches of exposed glass area. Ventilators must be equipped with expansion clips and with vent stops on pivoted vents. Top anchorage clips are required on vertical mullions.

Security Windows must be inside angle glazed. Individual lights in grille must not exceed 6" in width and 18" in height, and individual lights in the vents are limited to 350 square inches exposed glass area. Expansion clips are required on the ventilators and top anchorage clips on the mullions.



Bertha S. Sternberger School, Greensboro, N. C.
A. C. Woodroot, Archt.; L. B. Gallinore, Contractor

TRUSCON SCREENS

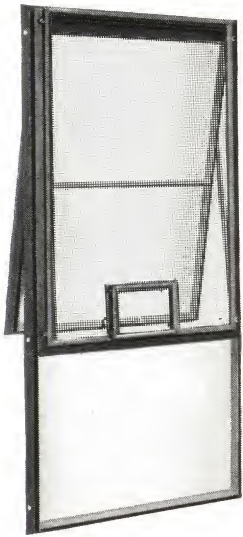
Truscon Screens are manufactured in our own plant and specially designed for the kind of window and ventilator with which they are to be used. This co-ordination of window and screen assemblies insures trouble-free operation under normal use. Truscon screens fill the other essential requirements for a completely satisfactory screen installation, which are:

1. Close-fitting screens giving adequate insect protection.
2. Ventilator hardware which provides convenient operation of the window ventilator without undue interference by the screen.
3. Screen attachments which work simply, yet positively, permitting easy installing or removing of screens, from within the room.
4. Sturdy, rust-resisting steel screen frames of the rewirable type, rigid enough to resist racking out of square or the displacement of screen cloth in routine use.

Screen cloth is normally furnished in 18 x 14 mesh and this mesh is recommended for general use. However, in some localities, complete insect protection requires the use of 18 mesh cloth which may be had at slight extra cost.

It is essential that designers give careful consideration to the type of screen and proper window hardware as they relate to the screening requirements of a building. Double-Hung Windows and open-in vents are readily covered with screens attached to the outside of the window, but with open-out vents it is necessary to provide hardware operation below the screen or a movable screen section through which to operate the vent.

Illustrated on this page are Truscon's recommended screen applications to projected and casement ventilators. As the most efficient, economical and practical yet devised for the screening of such ventilators, they have been accorded universal acceptance by the building industry.



Wicket Screen used with
Outward Projecting Vent



Fixed Screen and
Underscreen
Push Bar used with
Outward Projecting Vents



Fixed Screen used with
Inward Projecting Vents

KOOLSHADE® SCREENS

See pages 64 and 65 for description and specifications of the above type of screen which Truscon is licensed to manufacture and sell.

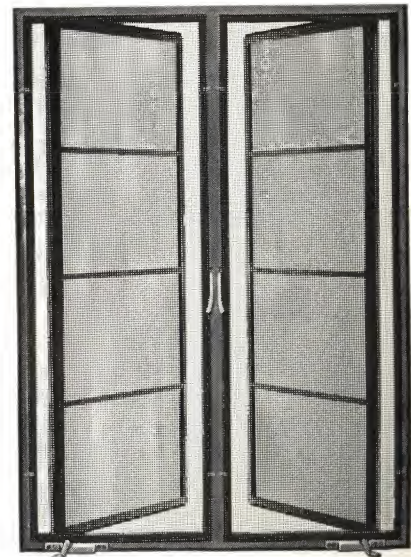
Trade-Mark Property Borg-Warner Corporation

BRONZE, STAINLESS STEEL AND ALUMINUM SCREENS

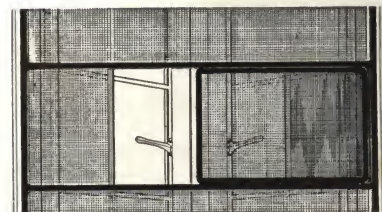
Truscon also manufactures bronze, stainless steel and aluminum frame screens. While these special metal frame screens are more expensive than the standard steel frames, under certain conditions the extra expense is amply justified.

In bronze and aluminum, the frames may be any of the types shown on the following page for steel. In stainless steel, screens will be made only with $\frac{3}{4}$ " CLX, 1" CLX and $\frac{7}{16}$ " CLC frames, and 18 x 14 mesh aluminum cloth with splines of solid aluminum.

Consult the nearest Truscon district sales office for information and prices on special metal window screens of any type or design.



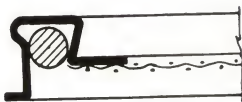
Fixed Screen and Roto
(Underscreen) Operator with
Casement Vents



Wicket Screen with Casement Vents

TRUSCON SCREENS

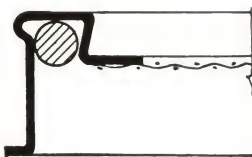
SCREEN SPECIFICATIONS



TYPE $\frac{1}{16}$ " CLC FRAME
For Use with Roto Casements
.032" Frame Material, No. 5 Rod Spline



TYPE $\frac{1}{16}$ " CLC FRAME
For Use with Series 138 Double-Hung
Windows
.050" Frame Material, No. 3 Rod Spline



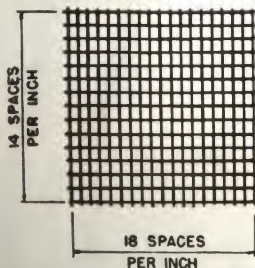
TYPE $\frac{3}{4}$ " AND 1" CLX FRAME
 $\frac{3}{4}$ " For Use with Project-Out Vents with
Underscreen Hardware, and Basement
and Utility Windows
1" For Use with Simplex Casements,
Project-Out Wicket Screens and
Project-In Vents
.037" Frame Material, No. 5 Rod Spline



TYPE $\frac{1}{16}$ " x $1\frac{1}{8}$ " BF FRAME
For Heavy Double-Hung Maxim-Air
and Heavy-Intermediate Louver
Windows
.028" Frame Material and Spline



TYPE $\frac{1}{16}$ " x $\frac{3}{4}$ " B FRAME
Furnished on Special Order Only
.028" Frame Material, No. 5 Rod Spline



STANDARD SCREEN CLOTH
.011" Diameter Bronze Wire
.012" Diameter Galvanized Steel Wire
.013" Diameter Aluminum Wire

1. Specify — Steel screens as manufactured by the Truscon Steel Division, Republic Steel Corporation, Youngstown, Ohio.

2. General — Screens shall effectively bar passage of insects to interior of building through the window ventilator and shall be designed for installing or removing from the inside. The screens shall fit closely and neatly around the entire perimeter of the ventilators, and shall be rewirable, easily removable, and interchangeable for ventilators of the same size and type. Furnish and provide for all necessary hardware — guides, stops, clips, bolts, screws — for a secure and insect-proof attachment to window. Screens and hardware shall be carefully adjusted and left in satisfactory working order.

3. Materials and Construction — All screen frames, splines and clips shall be fabricated of electro-galvanized steel. (CLC frames, where required, shall be of plain cold rolled steel.) Frame and guide members shall be cold formed to shape, straight and true and closely fitted at joints. Corners of channel frame shall be mitered and folded or splice welded in such manner as to effect neat, finished and secure junctures. Tubular frame corners shall be mitered, internally reinforced and welded. Where necessary, provide brace bars to maintain accurate rail and stile spacing. Edges over which screen cloth is turned shall be well rounded. Cloth shall be secured to the frames and held taut by removable splines of wire rods or formed metal. Screen cloth shall be commercial bronze, galvanized steel or aluminum wire, woven to 18 x 14 mesh.

4. Guard Screens — Where indicated on drawings or called for in specifications, furnish as an addition to standard insect screens, $\frac{1}{2}$ " mesh .062" diameter guard cloth, hot galvanized after weaving. This cloth is to be securely welded to frames of screens before shop paint coat is applied to steel material.

5. Type — (Refer to appropriate window specifications for proper type of screen, i.e., fixed flat, sliding or hinged wicket, top hung, fixed half, etc.)

6. Shop Painting — Screens shall be bonderized and given one coat of gray Bakelite paint, oven-baked.

7. Erection — Screen clips, guides, etc., necessary to installation of the screens, shall be attached to windows prior to finish painting. After paint is well dried, screens shall be hung, carefully adjusted and left in satisfactory working order.

GUARD SCREENS

For screen installations where it is necessary to protect insect screen cloth from damage, or for mild protection against passage of persons or articles through an open ventilator, a protective screen manufactured from $\frac{1}{2}$ " mesh .062" diameter guard cloth, hot galvanized after weaving, may be welded into the frame. This supplementary wire cloth protection may be similarly applied to screen frames in any design illustrated, or the screen frame may be furnished with only the guard cloth, when insect protection is unnecessary.

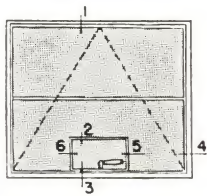


Guard Screen Applied
to $\frac{3}{4}$ " CLX Frame

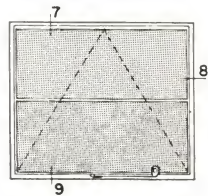
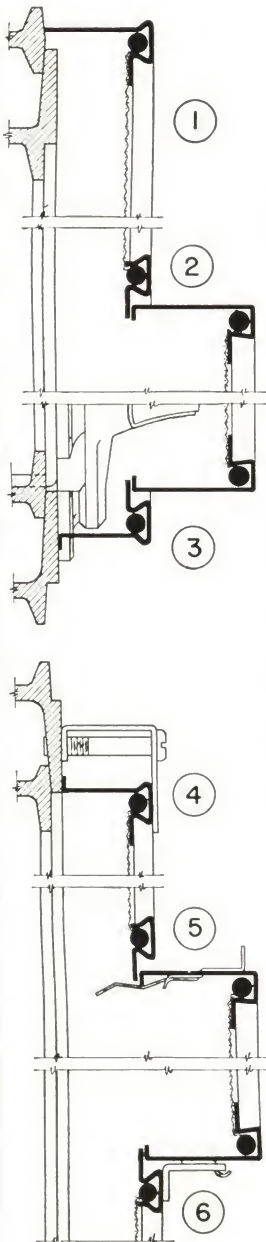


TRUSCON SCREENS

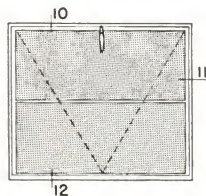
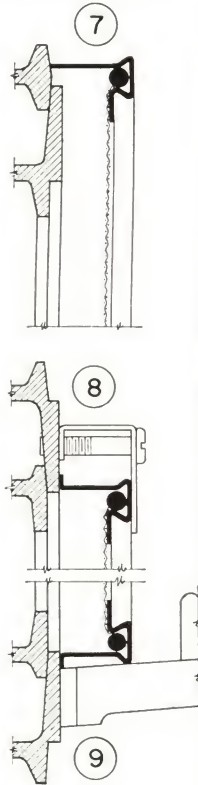
INSTALLATION DETAILS



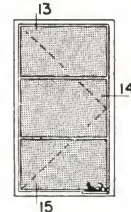
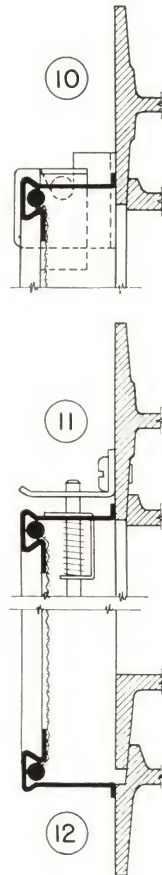
WICKET SCREEN
WITH
PROJECT OUT VENT



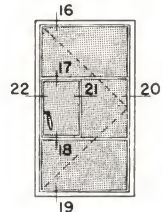
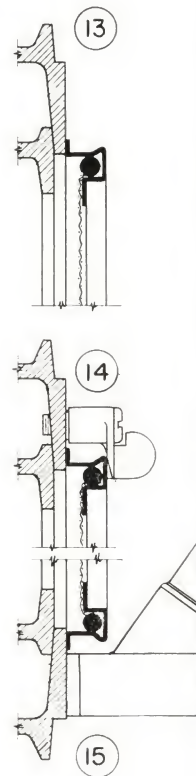
FIXED SCREEN
AND
UNDERSCREEN PUSH-BAR
WITH
PROJECT OUT VENT



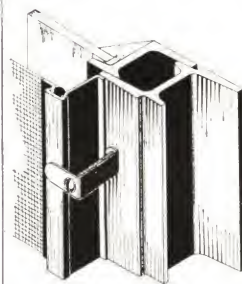
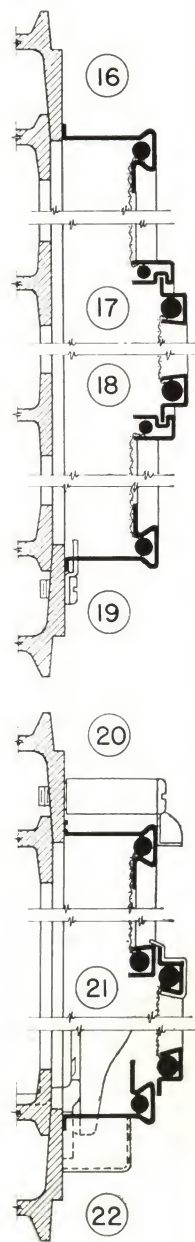
FIXED SCREEN
WITH
PROJECT IN VENT



FIXED SCREEN
AND
ROTO OPERATOR
WITH
CASEMENT VENT

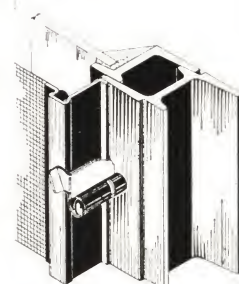
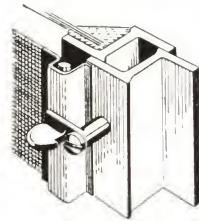


WICKET SCREEN
WITH
CASEMENT VENT



"C" Clip for
Projected Vent
Screens

Cam Acting Clip # 419
for Casement Screen



Wing Clip #91 R/L
for Casement Wicket
Screen

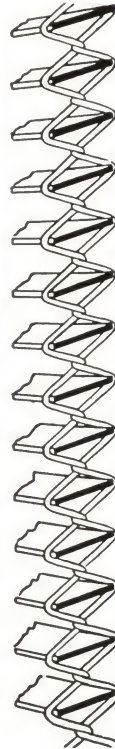
TYPICAL DETAILS OF SCREEN ATTACHMENT CLIPS

ABOVE DETAILS DEPICT SCREEN ATTACHMENT TO INTERMEDIATE SECTION WINDOWS. DETAILS OF ATTACHMENT TO OTHER SOLID SECTION WINDOWS ARE SIMILAR.

KOOLSHADE® SCREENS



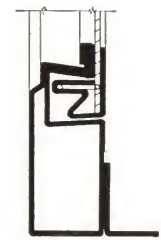
Photo Showing Visibility Through Actual Size Screen



Truscon has entered into a license agreement with the patentees and manufacturers of KoolShade Sunscreen cloth, the Reflectal Division of the Borg-Warner Corporation, whereby Truscon is given manufacturing rights to fabricate KoolShade Screens for use with all types of windows. KoolShade screens are furnished in the "BF" and "BFX" frame types, illustrated below.



BF FRAME



BFX FRAME

HIGHLIGHTS OF DESIGN AND APPLICATION

The description and principal advantages of this unique screening follows:

Description — KoolShade is a sun-shading device woven of bronze wires, the horizontals of which are tiny louvers approximately .050" wide and .005" thick. These are set at a 17° angle with approximately 17 louvers per inch. The vertical wires, spaced ½" apart, are twisted around each louver. KoolShade is oxidized after weaving. It is stretched taut in steel frames with the use of Ingersoll No. 402 Lacer Wire used in the top and bottom screen frame rails. KoolShade is designed to absorb and dissipate the solar heat load outside the opening and to serve as a glare control device.

Intercepts Solar Radiation — KoolShade, to be most effective, must be installed outside the glass. In that position it will intercept up to 90% of the sun's heat rays. It is a highly efficient shading device, yet offers great visibility, long life, ample air circulation, and little, if any, maintenance, when properly framed. KoolShade is actually a miniature venetian blind set permanently at the proper angle to stop the greatest amount of solar heat before it can enter the inside of a building.

Lets in Light and Air — Though KoolShade is extremely efficient in stopping heat, it admits plenty of restful, glareless light and air circulation.

Keeps Out Insects — KoolShade offers, as a secondary function, insect protection equal to that of regular screening. This, plus its great durability and freedom

from continual maintenance, makes it a most practical investment.

Provides Complete Visibility — Closed venetian blinds shut out the entire view . . . awnings obstruct half the view . . . while KoolShade affords ample visibility as it shades.

Reduces Air Conditioning Costs — KoolShade has stopped as much as 75% of the heat load on air conditioning systems, depending on sun exposed glass area. KoolShade and air conditioning complement each other, reducing initial and operating costs. (Common measure: 100 sq. ft. of KoolShade equal 1 ton of air conditioning.)

Effectiveness — The chart below illustrates comparative heat gain in BTU's per hour per sq. ft. of glass area through four types of windows. Sun's rays are warmest at "high noon" when shining directly on a southern exposure. The figures represent heat gain by radiant solar heat only, not including the relatively small heat gain by conduction through glass.

HEAT GAIN IN BTU'S PER HOUR PER SQUARE FOOT OF GLASS AREA				
SUN TIME ON JULY 21 40° LATITUDE	BARE GLASS	SHADES OR VEN. BLINDS	AWNINGS OR BLINDS	KOOLSHADE SUNSCREEN
SOUTH EXPOSURE AT NOON	74	44.4	22.2	6
EAST EXPOSURE AT 11 A. M. OR WEST EXPOSURE AT 1 P. M.	40	19.8	12.1	3.5

Trade-Mark Property Borg-Warner Corporation.

KOOLSHADE® SCREENS

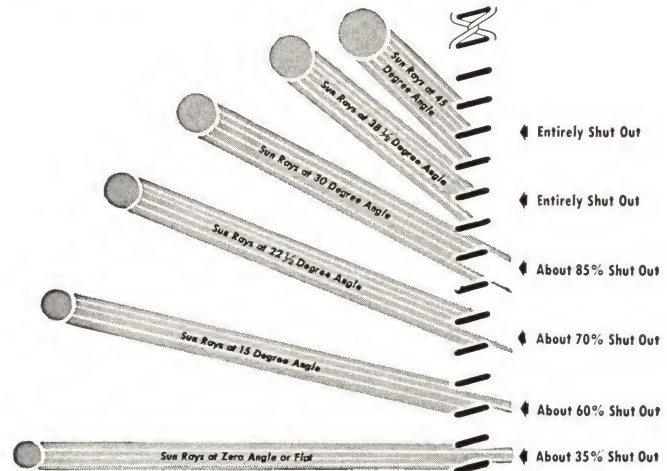
HIGHLIGHTS OF DESIGN AND APPLICATION (Cont'd)

Steps up Employees' Efficiency — Oppressive heat coupled with glaring light brings fatigue to workers — cuts production. KoolShade helps to maintain high morale and reduce worker complaints. It makes uniform control of air conditioning much easier.

SUN ANGLES vs. KOOLSHADE

The illustration at right shows how KoolShade shuts out the solar heat at various sun elevations. Note how all the rays are shut out during the hottest periods of the day. For example, in midsummer they are shut out completely from 8:15 a.m. to 3:45 p.m. sun time, and in Spring and Fall from 10:00 a.m. to 2:00 p.m. sun time. This shows that usable heat is allowed to enter at the times of the year when it is needed. On schools where glare control is the prime objective, KoolShade is often tilted out up to 20° to stop glare during low sun-angle seasons.

Controls Glare — KoolShade is specified by many school architects and lighting authorities as a glare controlling device. It moderates sun, ground and sky glare; holds brightness levels to an accepted value; is permanent and needs no adjustment.



SPECIFICATIONS

General — KoolShade Sunscreen cloth as manufactured by Borg-Warner Corporation and framing as manufactured by Truscon Steel Division of Republic Steel Corporation, Youngstown, Ohio.

Cloth — KoolShade woven with bronze wire with horizontal louvers made from 90-10 commercial bronze and warp wires made from Everdur Bronze. The horizontal louvers are to be approximately .050" wide and .005" thick. The horizontal louvers are to be spaced approximately 17 per inch. Warp wires are to be spaced 1/2" on center. The angle of the louvers is to be approximately 17°. KoolShade bronze wire is to be oxidized after weaving.

Framing — Frames shall be of formed electro-galvanized steel with special patented lacer like retainer and adapter spline to hold screen cloth securely in frame without distortion of braided bronze warp wires. KoolShade is to be stretched vertically until screen is taut. All screening anchorage in horizontal rails is to be done by use of Ingersoll Type No. 402 lacer wire.

Installation — For solar heat control install KoolShade vertically. For maximum glare control only, tilt at desired angle up to 20° from the bottom horizontal axis.



Cedars of Lebanon Hospital, Los Angeles
Skidmore, Owings & Merrill, Archts.; Baruch Corp., Contr.
Series 138 Double-Hung Windows and KoolShade Screens



Florsheim Shoe Co., General Office, Chicago
Shaw, Metz & Dolio, Archts.
Campbell, Lowrie, Lautermilch Corp., Contr.
Arch. Proj. Windows with KoolShade Screens in Private Office Area

TRUSCON INTERIOR STEEL DOORS

SWING DOORS AND FRAMES—SERIES 50



Truscon Series 50 Steel Doors and Frames offer many advantages. They are made from high quality steel and reinforced to provide maximum rigidity and assurance that they will not warp, twist, shrink or swell. All doors are sound deadened to eliminate metallic sounds in normal operation. The doors and frames are bonderized for maximum rust protection and paint adherence, and finished with a baked-on prime coat of paint. Mass production economies and low installation costs assure an economical installation in any type of building.

Doors are $1\frac{3}{8}$ " thick and of a pleasing, flush design. They are available in the standard height of 6'-8", and with the six most popular widths, 1'-8", 2'-0", 2'-4", 2'-6", 2'-8" and 3'-0". Also available are doors with louvers, glass or vision panels and double doors. Four types of locksets, designed to meet all normal requirements of residential doors, are offered. They are either Schlage Type "A" or Lockwood Type "SB" with both of bright brass material. Truscon now offers, in addition to the above, doors prepared to receive $2\frac{3}{4}$ " backset heavy duty hardware. These doors are available from factory only.

Frames for the doors are designed to fit practically every type of wall construction. Shipped knocked-down, they are easily and quickly assembled with the corner connections forming neat hairline joints. Frames are available in depths of $2\frac{3}{4}$ ", $3\frac{1}{4}$ ", $4\frac{1}{4}$ ", $5\frac{1}{4}$ " and $6\frac{1}{4}$ ", with the last two depths procurable from warehouses in the stock door sizes mentioned above.

Doors shipped from warehouse stocks are bound with heavy corrugated paper for protection during shipment. Each door leaf is designed for use in either right or left hand swing, and to open in or out. Frames, however, must be ordered right or left hand to accommodate required swing of door and are bundled for shipment.

Frames complete with hinges, rubber bumpers and strike plates are available for use with wood doors.

Underwriters' Labelled Doors and Frames are available on special order. Consult the nearest Truscon representative for detailed information.

SPECIFICATIONS

1. Specify—Truscon Interior Steel Doors and Frames, Series 50, as manufactured by the Truscon Steel Division, Republic Steel Corporation, Youngstown, Ohio.

2. Swing Doors—Doors shall be of flush construction, $1\frac{3}{8}$ " in thickness. Door stiles shall be constructed of 20 gauge steel roll-formed with $\frac{1}{8}$ " bevel in 2" on edges and reinforced for hinges and locks with steel plates welded in place. Panels shall be constructed of 20 U. S. gauge prime quality cold rolled steel, roll-formed and mechanically stiffened to achieve flatness and rigidity. On doors over 2'-0", panels shall be reinforced at approximately 17" centers, alternating at front and rear so that a stiffener occurs at approximately every $8\frac{1}{2}$ " in the door. Stiffeners shall be U shaped steel transverse sections, securely welded to the inside of the panel. The top and bottom of doors shall be reinforced and closed with die-formed steel channels securely spot welded to the inside of both panels.

3. Sound Deadener—All swing doors shall have the interior surface of the door panels coated with a sound deadener preparation of the heavy asphalt emulsion type. The emulsion shall be wiped on in such form and quantity as to eliminate all metallic reverberations incident to normal door operation. The mastic material shall be insoluble in water and resistant to a degree preventing its deterioration or dislodgment under the spray of the hot bonderizing baths and the 350° F. bake oven temperatures during the subsequent cleaning, bonderizing and prime painting operations.

4. Hardware—Doors shall be prepared to receive cylinder type locks of either standard or heavy duty type. (Selection may be made from the types described on page 67.)

5. Miscellaneous Hardware—The items hereinafter mentioned shall not be included under the door contract but preparation to receive same shall be provided as described.

(A) Door Closers—Door and frame shall be adequately reinforced at points of application. The drilling and tapping for installation shall be performed in field to permit maximum accuracy by using the door closer as a template.

(B) Push-Pull Plates—Standard hardware cutout shall be omitted from door and frame upon request and shop shipment. Installation with through machine screws shall be made in field.

(C) Door Stops and Holders (Not furnished or provided for by Truscon)—To be installed in field with sheet metal screws.

(D) Kick Plates (Not furnished or provided for by Truscon)—To be installed in field with sheet metal screws.

6. Frames—Frames shall be of rabbeted design, $2\frac{3}{4}$ ", $3\frac{1}{4}$ ", $4\frac{1}{4}$ ", $5\frac{1}{4}$ " or $6\frac{1}{4}$ " in depth as shown on plans and/or in door schedule. They shall be constructed of 18 U. S. gauge steel except that the $2\frac{3}{4}$ " frames shall be of 16 gauge steel. All frames shall be of knocked-down type with ends of members forming upper frame corners specially designed, insuring a square and solid joint held securely in place by double tenon construction with tenons bent to firmly lock the assembly. The strike cutout shall be provided with heavy gauge steel reinforcement, securely spot welded in the jamb.

(A) Hardware—Frames shall be equipped with two 3-knuckle leaf hinges ($3\frac{1}{4}$ " x $3\frac{1}{4}$ ") welded in place at the factory. The two knuckle leaves of hinges, hinge pins and No. 10-24 flat head machine screws shall be furnished separately for attaching door. Three rubber bumpers shall be provided for each frame.

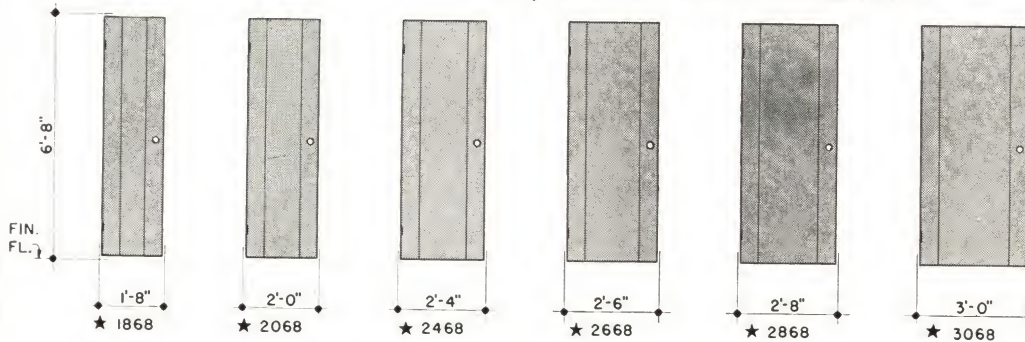
(B) Anchors—Each frame shall be equipped with six welded anchors for rigid attachment to metal or wood studs. For masonry walls three loose adjustable anchors per jamb shall be furnished. An adjustable sill anchor shall be securely attached to each jamb section for fastening frame to floor.

7. Shop Painting—All doors and frames shall be bonderized for maximum rust protection and paint adherence, in addition they shall receive one shop coat of high grade gray paint, oven-baked.

TRUSCON INTERIOR STEEL DOORS—SERIES 50

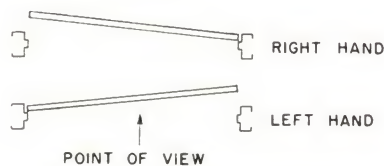
SWING DOORS

TYPES, SIZES AND HARDWARE

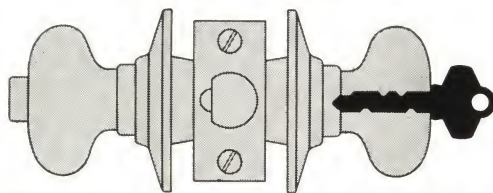


DIMENSIONS SHOWN ARE DOOR OPENING DIMENSIONS

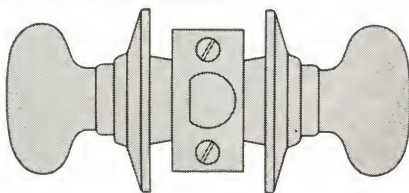
HAND OF DOOR MAY BE DETERMINED BY REFERRING TO SKETCHES BELOW. NOTE THAT DOOR MUST ALWAYS SWING AWAY FROM POINT VIEWED.



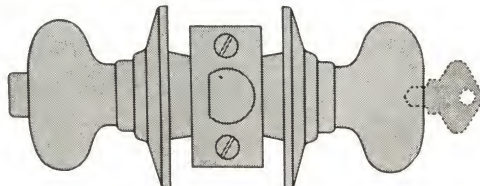
STANDARD HARDWARE



SCHLAGE TYPE A-52-WD — LOCKWOOD TYPE SB-328
Bolt operated by key from outside and push-button knob from inside. Push-button knob inside locks or unlocks outside knob.



SCHLAGE TYPE A-10-S — LOCKWOOD TYPE SB-310
For Closet, Vestibule and Connecting Doors. A plain latch operated by knob from either side. Has no locking mechanism.



SCHLAGE TYPE A-40-S — LOCKWOOD TYPE SB-310 1/2
For Bedroom Doors. Locking mechanism controlled by push button on knob from inside. Emergency key opening on outside knob.

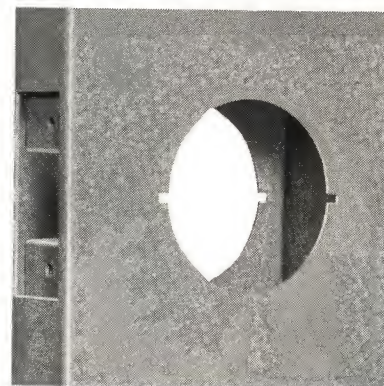
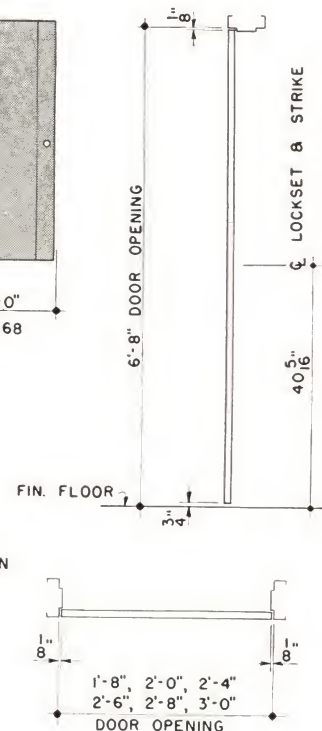
SCHLAGE TYPE A-40-SB — LOCKWOOD TYPE SB-310 1/4
For Bathroom Doors. Same as above except inside push-button knob finished in bright chrome.

All finishes are bright brass except types A-40-SB and SB-310 1/4 which are as specified.

Schlage "D" Series or Lockwood "HN" Series are suitable for the 2 3/4" heavy duty lockset preparation.

★ DENOTES WAREHOUSE STOCK TYPES.

- ANY DOOR LEAF MAY BE INSTALLED WITH HINGES AT RIGHT OR LEFT AND MAY OPEN IN OR OUT.
- DOORS WITH SPECIAL FEATURES, AS LOUVERS, VISION PANELS, HALF GLASS PANELS OR DOOR CLOSURE PREPARATION MUST INDICATE HAND OF DOOR AS DETERMINED BY SKETCH AT LEFT.
- FOR STUD OPENING SIZES USE DOOR OPENING DIMENSIONS SHOWN AND ADD 4 1/2" IN WIDTH AND 2 1/4" IN HEIGHT.



Standard Lockset Preparation: 2 1/8" Cutout—2 3/4" Backset
Heavy Duty Lockset Preparation: 2 1/8" Cutout—2 3/4" Backset



Lockset Reinforcement



Hinge Cutout and Reinforcement in Door Stile

TRUSCON INTERIOR STEEL DOORS—SERIES 50

PAIRS OF SWING DOORS—GLASS AND VISION PANELS—LOUVERS

DOOR TYPES

- ★ 4068 DS
- ★ 5068 DS
- ★ 6068 DS

WAREHOUSE STOCKS TO HAVE SURFACE BOLTS ON HINGE FACE ONLY.

PAIRS OF SWING DOORS

HAND OF DOOR IS DETERMINED BY LOCATION OF ACTIVE LEAF WHEN DOORS SWING AWAY FROM POINT VIEWED.

NOTES

- INACTIVE LEAF IS FURNISHED WITH SURFACE TYPE TOP AND BOTTOM BOLTS. THE DOOR IS PREPARED FOR FIELD ATTACHMENT.
- SURFACE BOLTS MAY BE LOCATED ON EITHER FACE OF THE INACTIVE LEAF, AT CUSTOMER'S OPTION. (WAREHOUSE STANDARD IS ON HINGE FACE ONLY).
- DIMENSIONS SHOWN ARE DOOR OPENING DIMENSIONS.
- ★ DENOTES WAREHOUSE STOCK TYPES.

ASTRAGAL

GLASS PANEL

DOOR TYPES

- GP 2668
- ★ GP 2868
- ★ GP 3068

GLASS SIZES

- 16" X 30"
- 18" X 30"
- 22" X 30"

VISION PANEL

GLASS SIZE - 10" X 10"

DOOR TYPES

- ★ VP 2668
- ★ VP 2868
- ★ VP 3068

PANEL DETAIL

NOTES

- GLASS MUST BE FURNISHED AND INSTALLED BY OTHERS.
- HAND OF DOORS MUST ALWAYS BE GIVEN WHEN EQUIPPED WITH A PANEL.
- GLAZING STOPS ARE ALWAYS LOCATED ON HINGE FACE OF DOOR.
- DOORS MAY ALSO BE EQUIPPED WITH LOUVERS IN ADDITION TO GLASS OR VISION PANELS.
- ★ DENOTES WAREHOUSE STOCK TYPES.

WAREHOUSE STOCK TYPES

LOUVERS

VERTICAL SECTION

1868 DOOR

18.6 SQ. IN. - 14 7/8" HIGH

27.9 " " - 23 3/8" "

3068 DOOR

★ 58.2 SQ. IN. - 14 7/8" HIGH

87.3 " " - 23 3/8" "

2068 DOOR

★ 27.0 SQ. IN. - 14 7/8" HIGH

40.5 " " - 23 3/8" "

2868 DOOR

40.4 SQ. IN. - 14 7/8" HIGH

60.6 " " - 23 3/8" "

2468 DOOR

38.8 SQ. IN. - 14 7/8" HIGH

58.2 " " - 23 3/8" "

2668 DOOR

★ 40.4 SQ. IN. - 14 7/8" HIGH

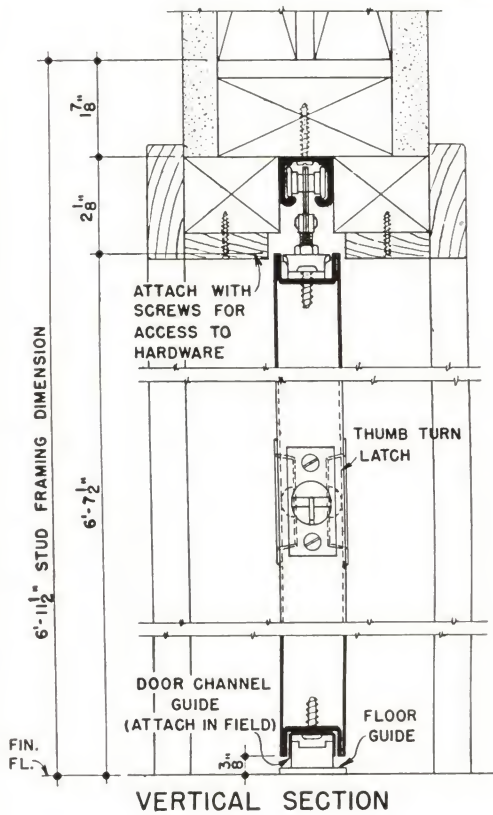
60.6 " " - 23 3/8" "

- LOUVERS ARE THE FIXED, PIERCED TYPE.
- HAND OF DOORS MUST ALWAYS BE GIVEN.
- LOUVER AREAS SHOWN ARE TOTAL CLEAR OPENINGS FOR FREE AIR PASSAGE THROUGH DOOR.
- LOUVERS ARE DESIGNATED BY NOMENCLATURE AS "L2B", "L2T" OR "L2TB"; AND "L3B", "L3T" OR "L3TB". FIGURE INDICATES SIZE OF LOUVER - "2" EQUALS 14 7/8" HEIGHT AND "3" EQUALS 23 3/8" HEIGHT. LETTER "B" OR "T" INDICATES LOCATION IN TOP OR BOTTOM OF DOOR. "TB" DESIGNATES THE CERTAIN SIZE LOUVER IN BOTH TOP AND BOTTOM OF DOOR - TOTAL DOOR LOUVER AREA IS DOUBLE THAT SHOWN IN TABLE AT RIGHT.
- ★ DENOTES WAREHOUSE STOCK SIZES. STOCKED ONLY WITH LOUVERS 14 7/8" HIGH LOCATED EITHER IN THE TOP OR IN THE BOTTOM OF THE DOOR.

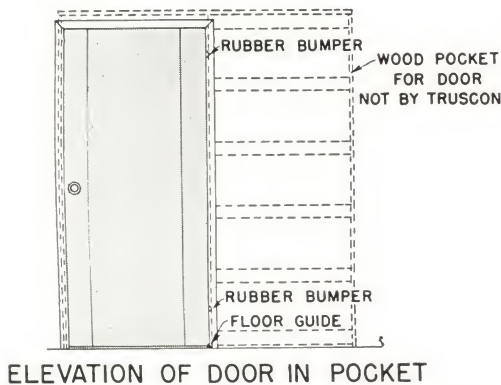
TRUSCON INTERIOR STEEL DOORS—SERIES 50

SLIDING RECESS DOORS—TRIMMED OPENINGS

SLIDING RECESS DOORS



VERTICAL SECTION



ELEVATION OF DOOR IN POCKET

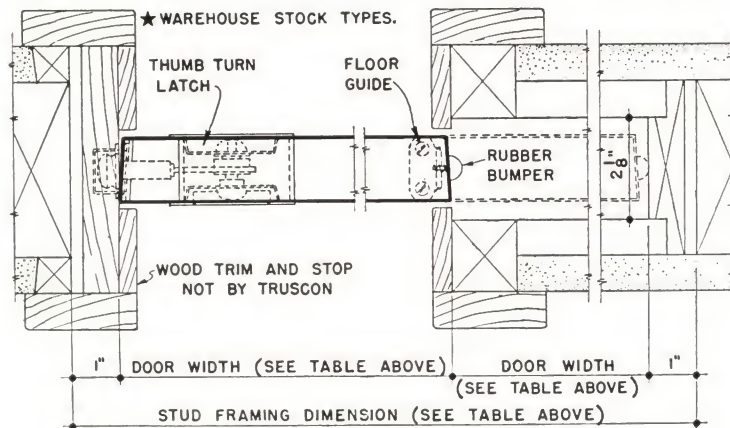
The Series 50 Sliding Recess Door is available from warehouse stocks as a space saving feature in modern home construction. It eliminates the necessity of clearances for the swing of a standard door.

This design is recommended for any door opening which remains fully opened for normal usage but occasionally may be temporarily closed. Popular uses are between kitchen and dining room. This design is also convenient as a bedroom closet door where space is particularly restricted.

The door is furnished complete with overhead track, trolleys, latch set with thumb turn, auxiliary door channel guide, and floor guide. The door pocket, trim and stops are not included as they are fabricated on the project from standard dimension lumber. No special wall construction is required as door is designed for installation in a standard 2 x 4 stud wall.

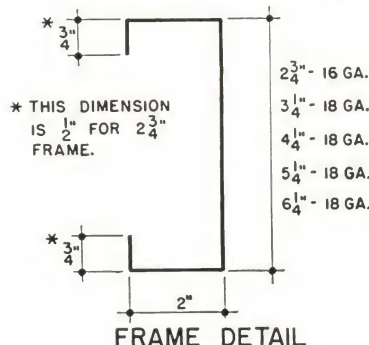
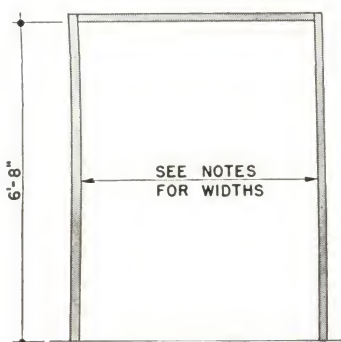
TABLE OF WIDTHS

DOOR TYPE	★ 2068 SD	★ 2668 SD	★ 2868 SD	★ 3068 SD
DOOR WIDTH	1'-11 $\frac{3}{4}"$	2'-5 $\frac{3}{4}"$	2'-7 $\frac{3}{4}"$	2'-11 $\frac{3}{4}"$
STUD FRAMING DIMENSION	4'-1 $\frac{1}{2}"$	5'-1 $\frac{1}{2}"$	5'-5 $\frac{1}{2}"$	6'-1 $\frac{1}{2}"$



HORIZONTAL SECTION

TRIMMED OPENINGS



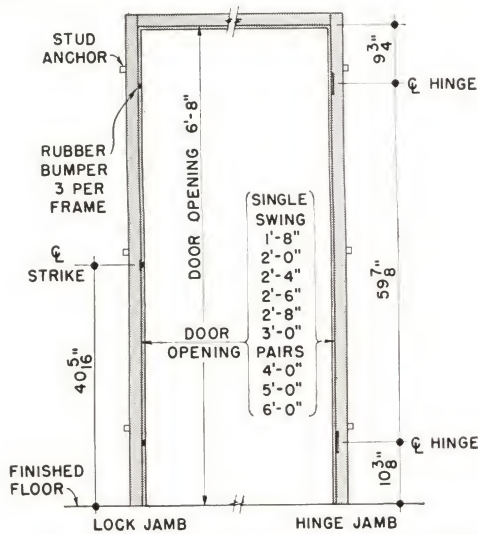
FRAME SYMBOLS

- ★ T06 - 4068
 - ★ T06 - 5068
 - ★ T06 - 6068
- PREFIX "T06" INDICATES A $\frac{6}{4}"$ TRIMMED OPENING FRAME. FOR OTHER FRAME DEPTHS USE "T02" FOR $2\frac{3}{4}"$, "T03" FOR $3\frac{1}{4}"$, ETC.

NOTES

- TRIMMED OPENING FRAMES ARE ASSEMBLED AND ANCHORED SIMILAR TO SWING DOOR FRAMES.
- AVAILABLE IN ANY WIDTH IN INCREMENTS OF 2".
- ★ DENOTES WAREHOUSE STOCK TYPES IN $5\frac{1}{4}"$ AND $6\frac{1}{4}"$ DEPTHS.

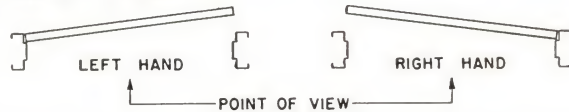
TRUSCON INTERIOR STEEL DOORS—SERIES 50 FRAMES FOR SWING DOORS



ELEVATION-TYPICAL SWING DOOR FRAME

FOR STUD OPENING SIZES USE DOOR OPENING DIMENSIONS SHOWN AND ADD 4 1/2" IN WIDTH AND 2 1/4" IN HEIGHT.

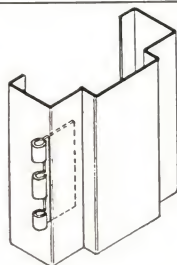
HAND OF FRAME IS DETERMINED BY REFERRING TO SKETCHES BELOW. NOTE THAT DOOR MUST ALWAYS SWING AWAY FROM POINT VIEWED.



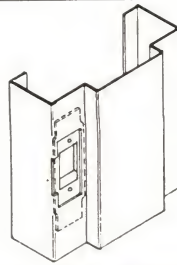
FRAME TYPE

DOOR TYPES	FRAME DEPTHS				
	2 3/4" ♦	3 1/4"	4 1/4"	5 1/4"	6 1/4"
1868	2-1868	3-1868	4-1868	★ 5-1868	★ 6-1868
2068	2-2068	3-2068	4-2068	★ 5-2068	★ 6-2068
2468	2-2468	3-2468	4-2468	★ 5-2468	★ 6-2468
2668	2-2668	3-2668	4-2668	★ 5-2668	★ 6-2668
2868	2-2868	3-2868	4-2868	★ 5-2868	★ 6-2868
3068	2-3068	3-3068	4-3068	★ 5-3068	★ 6-3068
● 4068 DS	2-4068 DS	3-4068 DS	4-4068 DS	★ 5-4068 DS	★ 6-4068 DS
● 5068 DS	2-5068 DS	3-5068 DS	4-5068 DS	★ 5-5068 DS	★ 6-5068 DS
● 6068 DS	2-6068 DS	3-6068 DS	4-6068 DS	★ 5-6068 DS	★ 6-6068 DS

★ DENOTES WAREHOUSE STOCK FRAMES.
 "R. H." OR "L. H." (HAND OF FRAME) MUST FOLLOW THE FRAME SYMBOL. SEE "HAND OF FRAME" ABOVE FOR SINGLE DOORS AND PAGE 68 FOR PAIRS OF DOORS.
 ● DENOTES PAIRS OF SWING DOORS ONLY.
 ● 2 3/4" FRAMES ARE OF 16 GA. STEEL; ALL OTHERS OF 18 GA.
 ♦ TOP STRUTS REQUIRED FOR 2 3/4" FRAMES.

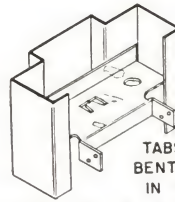


**HINGE LEAF
WELDED TO FRAME**



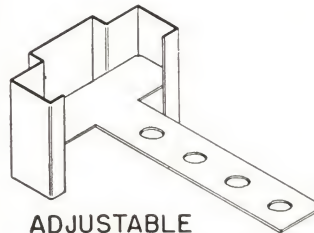
**WELDED STRIKE
REINFORCEMENT**

ANCHORS

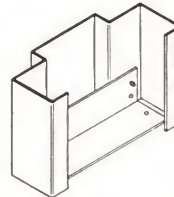


TABS TO BE
BENT INTO PLACE
IN FIELD

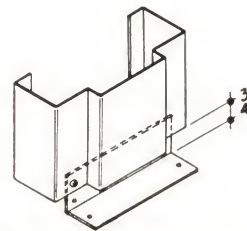
WELDED STUD ANCHOR



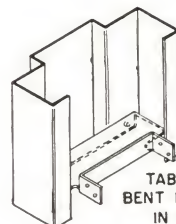
**ADJUSTABLE
MASONRY ANCHOR**



**ADJUSTABLE FLOOR ANCHOR
TO FINISHED FLOOR**



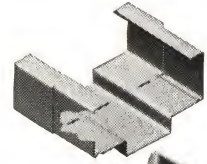
**ADJUSTABLE FLOOR ANCHOR
TO SUB-FLOOR**



TABS TO BE
BENT INTO PLACE
IN FIELD

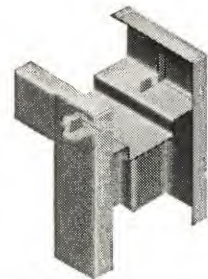
**FLOOR ANCHOR
ATTACHED TO PLATE
(FACTORY SHIPMENT ONLY)**

ASSEMBLY OF DOOR FRAMES



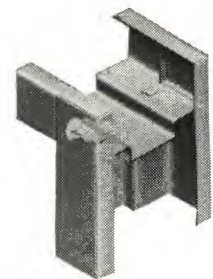
STEP 1

Jamb and Head Members
before assembly



STEP 2

Jamb and Head Members
partially assembled. Note
two tenons ready to be
bent in place



STEP 3

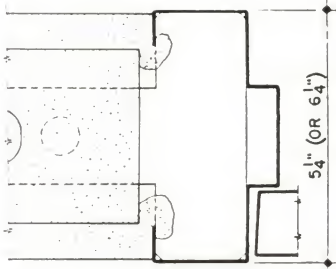
Jamb and Head Members
assembled. The two tenons
bent in place, securely
locking the joint

(PATENT NO. 2601164)

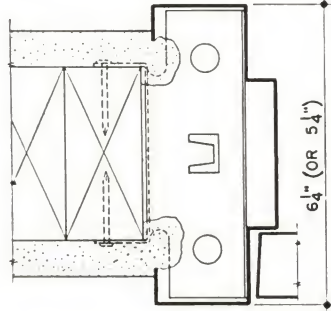
TRUSCON INTERIOR STEEL DOORS—SERIES 50

FRAMES FOR SWING DOORS

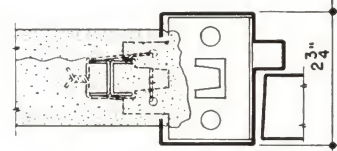
FRAME INSTALLATION DETAILS



MASONRY WALL

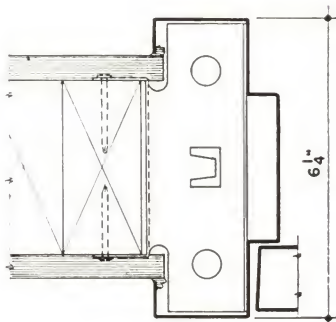


WOOD STUD WALL

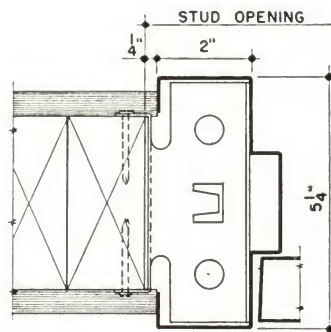


2" SOLID PLASTER
PARTITION WITH
METAL LATH CORE

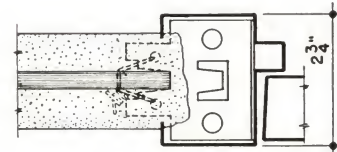
(TOP STRUTS REQUIRED)



DRY WALL

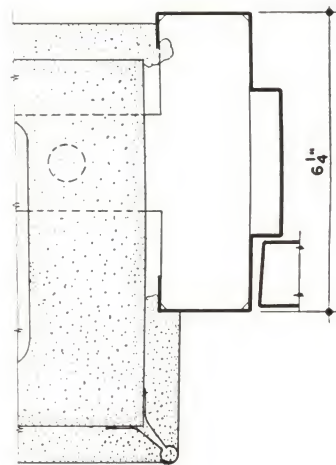


DRY WALL

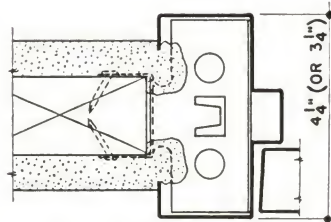


2" PLASTER
PARTITION WITH
ROCKLATH CORE

(TOP STRUTS REQUIRED)

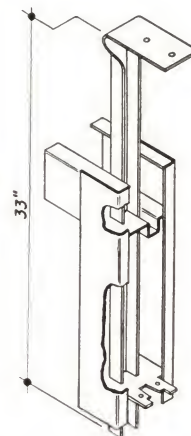


HEAVY MASONRY WALL



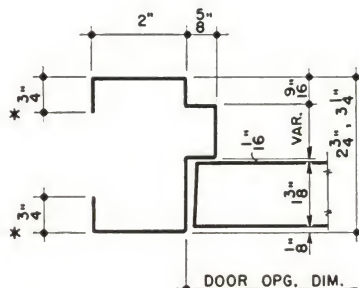
WOOD STUD WALL

TOP
STRUT
FURNISHED FOR
2" SOLID
PLASTER
PARTITIONS

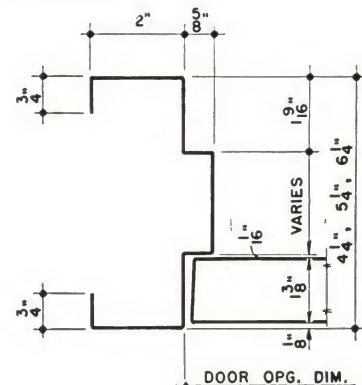


FRAME DETAILS

* THIS DIMENSION IS 1/2"
FOR 2 3/4" FRAME.



2 3/4" & 3 1/4" FRAMES

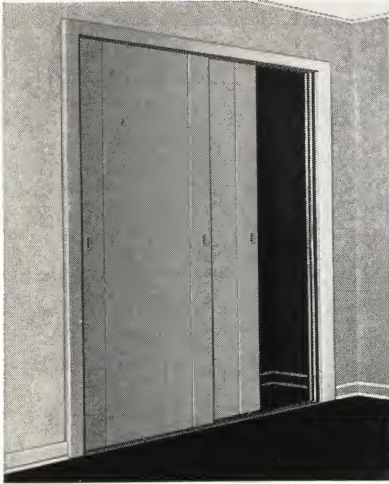


4 1/4", 5 1/4", & 6 1/4" FRAMES

2 3/4" FRAMES ARE FORMED FROM
16 GA. STOCK, ALL OTHERS ARE
18 GAUGE.
★ WAREHOUSE STOCK FRAMES ARE
5 1/4" AND 6 1/4" DEPTHS.

TRUSCON INTERIOR STEEL DOORS—SERIES 51 and 51B

SLIDING CLOSET DOORS



These modern Sliding Doors provide total closet accessibility, more usable floor space and materially reduce construction costs. Outstanding economy is obtained through the elimination of material and labor required, (1) to construct and plaster approximately one-half the area occupied by the full width of the Sliding Door opening, and (2) to furnish and install frame, swing door and hardware.

Series 51 and 51B Flush Type Sliding Closet Doors are precision made of prime quality cold rolled sheets heavily reinforced for rigidity, thus insuring perfect fit and permanent trouble-free operation. All Truscon doors are bonderized to provide maximum resistance to corrosion, and finished with a prime coat of baked-on paint. Each door panel is equipped with two noiseless nylon rollers, nylon top guides and rubber bumpers at jambs to provide smooth, quiet operation.

Finger pulls are fitted into each side of both panels at the factory. Units are available in four standard widths, 3'-0", 4'-0", 5'-0" and 6'-0". Height of doors is 6'-8" or 7'-10".

SERIES 51B—FRAMED UNITS

Series 51B Sliding Closet Doors differ from the Series 51 only in that they are equipped with a knocked-down door frame matching that of the swing doors in appearance and assembly. Materials are packaged in sturdy cartons with the exception of the door frames. The necessity of wood bucks and trim is eliminated in this type of installation. See page 73.

SERIES 51—"KD" PACKAGE UNITS

Series 51 Sliding Closet Doors are shipped from warehouse stock as complete units, packaged in sturdy cartons containing two door panels, all necessary hardware, and accurately punched header, jamb and track sections; also all screws for assembly and installation in wood frame partitions. Wood trim is not included. See pages 74 and 75.

SPECIFICATIONS

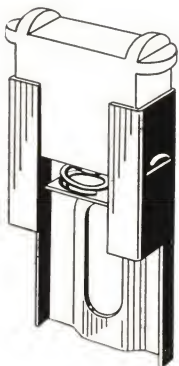
1. Material and Construction — Doors shall be constructed of No. 20 U. S. gauge prime quality cold rolled steel, roll formed and mechanically stiffened to achieve flatness and rigidity. Panels shall be reinforced at approximately 17" centers. Stiffeners shall be U shaped steel transverse sections, securely welded to the inside of the panel. The top and bottom of doors shall be reinforced and closed with die formed steel channels securely spot welded to the inside of both panels.

2. Hardware — Each door panel shall have two noiseless nylon rollers, steel head keepers with sound reducing nylon top guides, and rubber bumpers, all for field attachment, and a pair of finger pulls attached in the shop.

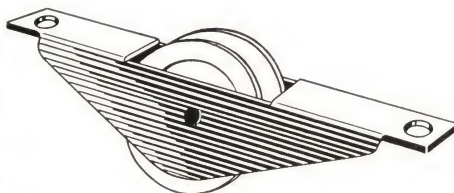
3. Head, Jamb and Sill Members — Head and jamb members shall be roller die formed to conceal edges of door panels, and shall be constructed of No. 22 U. S. gauge steel, accurately punched for attachment to wood jamb studs and header in Series 51 doors, or securely screwed to the frame for Series 51B doors. Sill shall be of steel, roller die formed into double track section and punched for attaching to floor. Furnish necessary screws and nuts to assemble unit and, for Series 51 doors, for installing in openings built and prepared by others.

4. Frames (for Series 51B doors only) — Frames shall be of flush face, non-rabbeted design with the head and jamb guides attached in field. Otherwise, they shall be of the same material, design and construction as the swing door frames, and similarly anchored. Hinges and lock preparation shall be omitted.

5. Shop Painting — Doors, head and jamb members, and frames shall be bonderized for maximum rust protection and paint adherence, in addition they shall receive one shop coat of high grade gray paint, oven-baked.



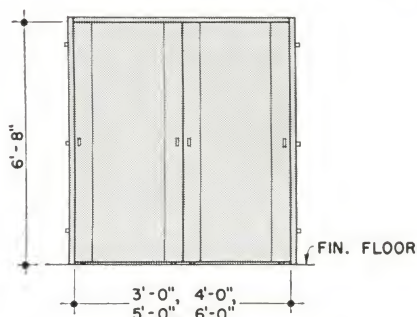
Nylon Top Guide and
Nylon Roller for Silent
and Smooth Operation.



TRUSCON INTERIOR STEEL DOORS—SERIES 51B

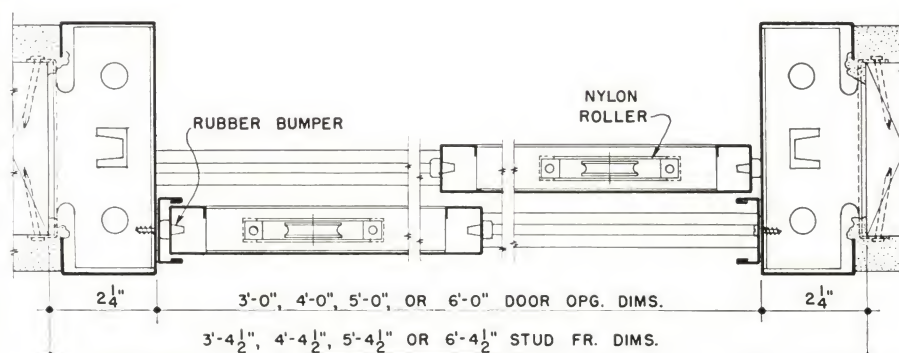
FRAMED SLIDING CLOSET DOORS

TYPES, SIZES AND DETAILS

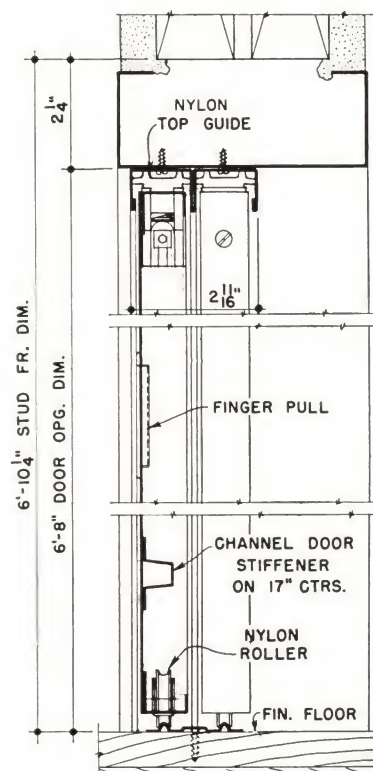
SLIDING CLOSET DOORS
8 FRAMES - SERIES 51B

DOOR SYMBOLS - SERIES 51B

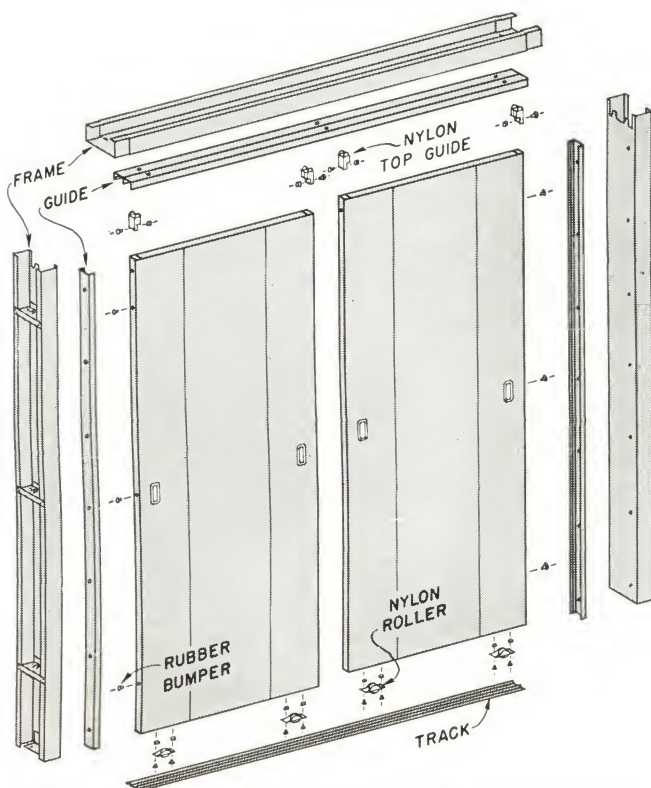
- ★ 3068 - 6F SUFFIX "6F" INDICATES
 - ★ 4068 - 6F STANDARD SLIDING CLOSET
 - ★ 5068 - 6F DOOR EQUIPPED WITH A
 - ★ 6068 - 6F 6 1/4" FRAME. FOR OTHER
 - FRAME DEPTHS USE 2F
 - FOR 2 3/4", 3F FOR 3 1/4", ETC.
- ★ DENOTES TYPES STOCKED IN WAREHOUSE.
WITH FRAME DEPTHS OF 5 1/4" AND 6 1/4".



HORIZONTAL SECTION

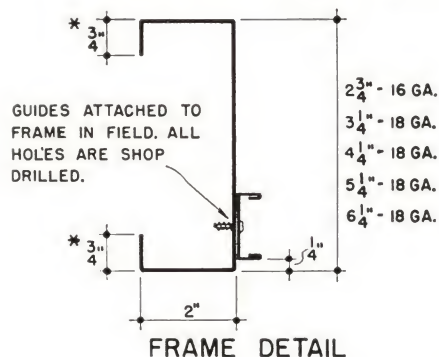


VERTICAL SECTION



EXPLODED VIEW OF DOOR, GUIDES AND FRAME

* THIS DIMENSION IS 1/2" FOR 2 3/4" FRAME.



FRAME DETAIL

NOTES

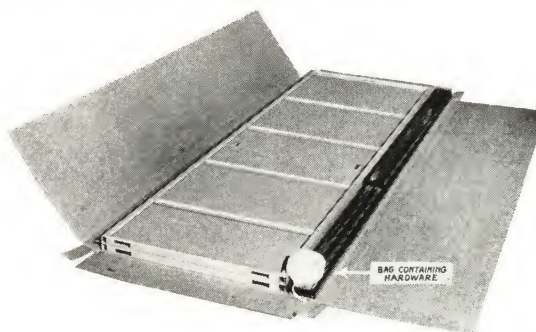
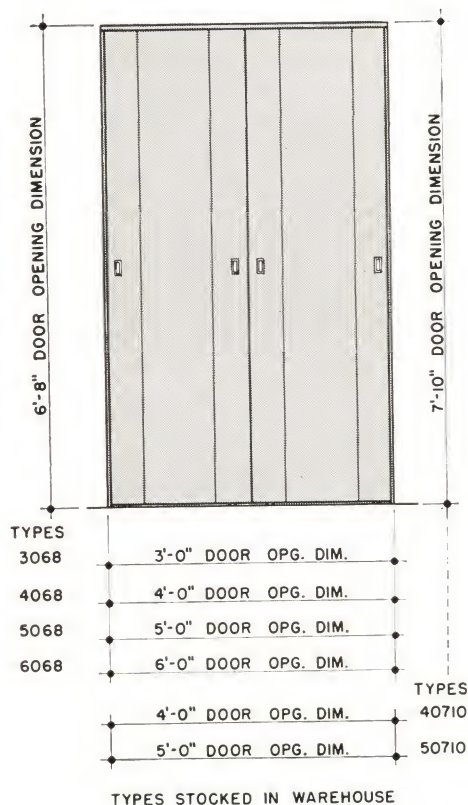
- HARDWARE ASSEMBLY IS THE SAME AS FOR SERIES "51" SLIDING CLOSET DOORS.
- JAMB ANCHORS, FLOOR ANCHORS AND TOP STRUTS FOR FRAMES OF SERIES "51B" SLIDING CLOSET DOORS ARE THE SAME AS FOR SERIES "50" SWING DOORS.

TRUSCON METAL WINDOWS AND DOORS

TRUSCON INTERIOR STEEL DOORS—SERIES 51

"PACKAGE" TYPE SLIDING CLOSET DOORS

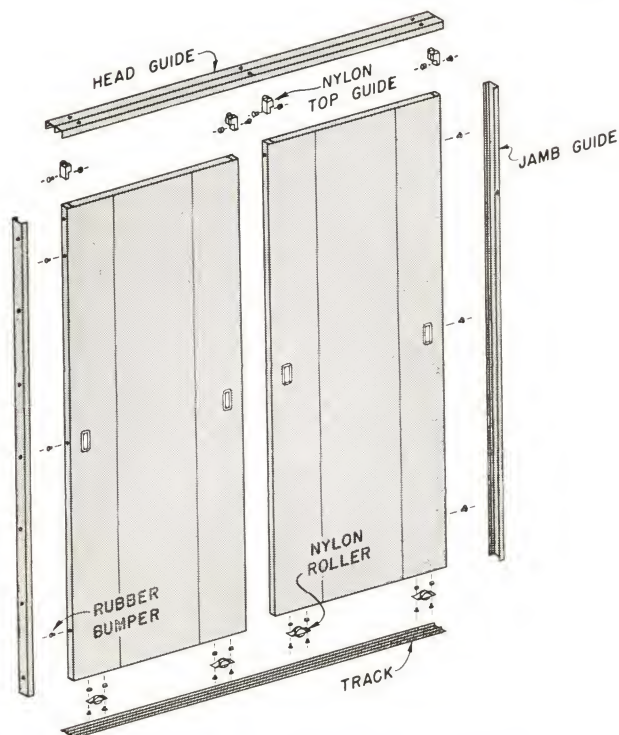
TYPES, SIZES AND ASSEMBLY DETAILS



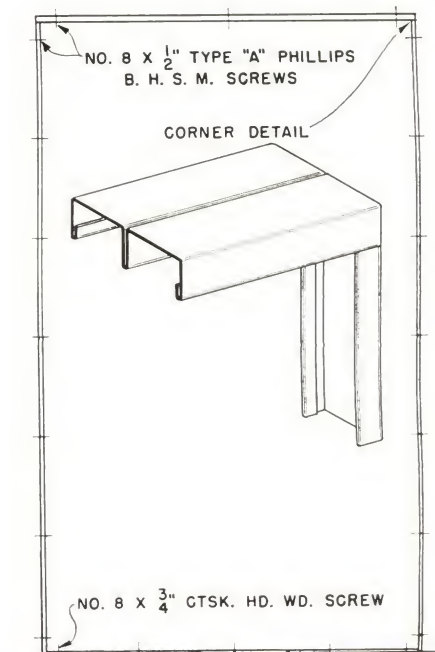
Sliding Closet Door Units Series 51 are shipped to the job complete in one package, ready for assembly. Illustration shows doors, with stiffeners welded to reverse side, bag containing all necessary hardware, metal header, jambs and track sections.

HARDWARE ASSEMBLY NOTES

- HARDWARE IS TO BE ATTACHED TO THE DOOR AFTER THE DOOR HAS BEEN PAINTED.
- FINGER PULLS ARE FACTORY INSTALLED.
- ROLLERS ARE INSERTED FROM THE OUTSIDE AND FASTENED WITH NO. 8-32 X $\frac{3}{8}$ " F. H. M. S. AND SQ. NUTS.
- RUBBER BUMPERS SHOULD BE WET AND INSERTED INTO PREPARED HOLES IN THE DOOR AND THE POINT OF THE BUMPER PULLED THROUGH THE HOLE FROM THE OPPOSITE SIDE.
- TOP GUIDES ARE AT FIRST ATTACHED LOOSELY TO THE UPPER HOLES WITH THE GUIDE DOWN AGAINST THE TOP OF THE DOOR. GUIDES ARE FASTENED WITH NO. 8-32 X $\frac{3}{8}$ " F. H. M. S. AND SQ. NUTS. AFTER THE DOOR HAS BEEN INSTALLED IN THE HEAD GUIDE AND FLOOR TRACK, THE GUIDES ARE ADJUSTED UPWARD UNTIL THE DOOR IS SECURE ON THE TRACK AND STILL FREE TO OPERATE. TIGHTEN THE SCREWS AND NUTS.



EXPLODED VIEW OF DOOR AND GUIDES

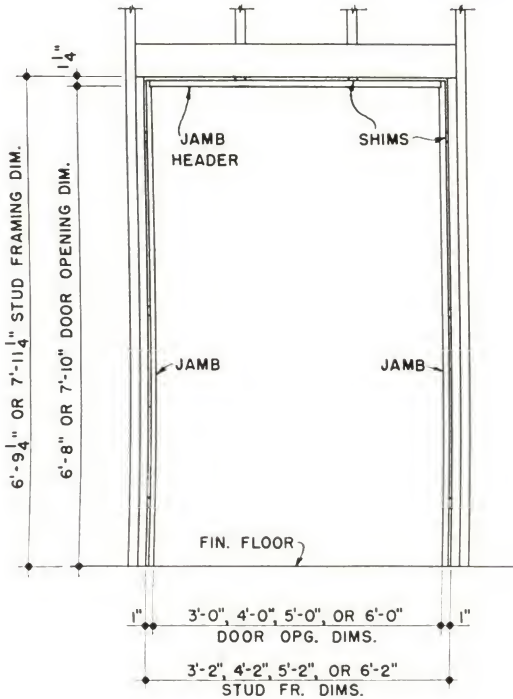


ELEVATION OF DOOR GUIDES

TRUSCON INTERIOR STEEL DOORS—SERIES 51

"PACKAGE" TYPE SLIDING CLOSET DOORS

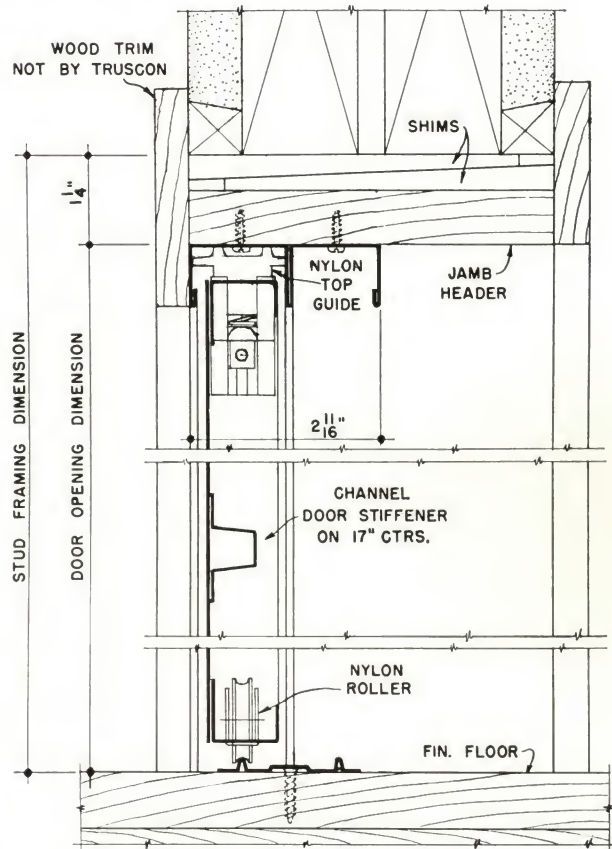
INSTALLATION DETAILS



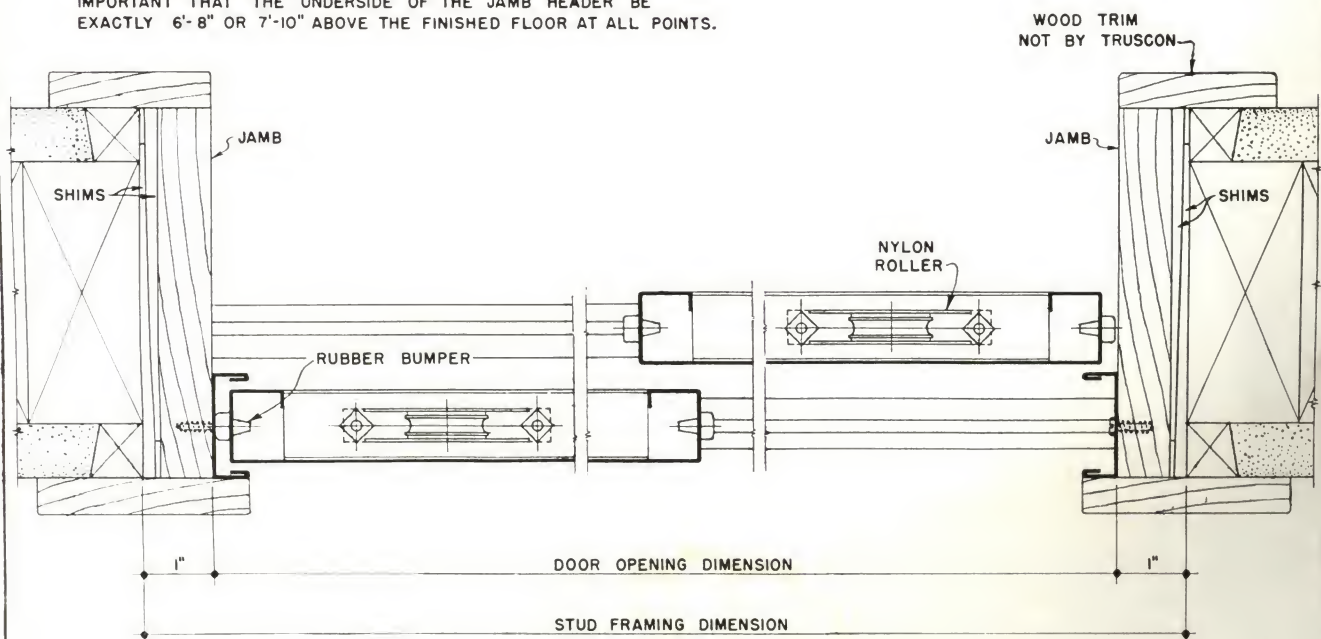
FRAMING DIMENSIONS

NOTES

- STUD FRAMING IS ERECTED ESSENTIALLY THE SAME AS FOR A CONVENTIONAL DOOR JAMB. THE WIDTH BETWEEN STUDS SHOULD BE 2" GREATER THAN THE OPENING WIDTH OF THE DOOR.
- THE JAMB IS TO BE MADE OF 3/4" STOCK AND INSTALLED AFTER WALL AND FLOOR HAVE BEEN COMPLETED. IT IS IMPORTANT THAT THE UNDERSIDE OF THE JAMB HEADER BE EXACTLY 6'-8" OR 7'-10" ABOVE THE FINISHED FLOOR AT ALL POINTS.



VERTICAL SECTION



HORIZONTAL SECTION

TRUSCON

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REPUBLIC STEEL CORPORATION

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